

ANNUAL PUBLIC HEALTH REPORT

OF THE

PROVINCE OF BIHAR AND ORISSA

FOR THE YEAR

1931

AND THE

ANNUAL VACCINATION REPORT

FOR THE YEAR

1931-32

BY

Lt.-Col. J. A. S. PHILLIPS, D.P.H., I.M.S.,

Director of Public Health, Bihar and Orissa.

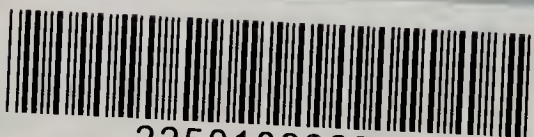


PATNA

SUPERINTENDENT, GOVERNMENT PRINTING, BIHAR AND ORISSA

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PROVINCE OF BIHAR & ORISSA

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REFERENCES

Boundary:— Division.
 " District
 " Sub-division
 " State

REFERENCE TO NUMBERS

- | | |
|---------------|--------------|
| 1 KARAIKELA | 5 TIGIRIA |
| 2 NILGIRI | 6 ATHGARH |
| 3 NARSINGHPUR | 7 KHANDPARRA |
| 4 BARAMBA | 8 RANPUR |

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Annual Public Health Report of the Province of Bihar and Orissa for the year 1931.

INTRODUCTION.

SECTION I.—*Meteorology.*

1. Rainfall and grain prices.—

Meteorological conditions are best considered in the four distinct periods of the year, as has been done hitherto, i.e., (a) the cold weather period, including the months of January and February, (b) the hot weather period from March to May, (c) the monsoon period from June to September and (d) the retreating monsoon period from October to December. The following brief account of the meteorological conditions in Bihar and Orissa is extracted from the reports of the Director-General of Observatories :—

(a) *The cold weather period.*—In January, there was practically no rain in the province anywhere. Maximum and minimum temperatures were higher than normal. In February, however, the rainfall in Bihar and Orissa was in excess of the normal and the humidity was therefore also above normal. Maximum temperatures were below normal but minimum temperatures were above normal.

(b) *The hot weather period.*—The rainfall in March was slightly below normal in Bihar and Chota Nagpur but about normal in Orissa. The humidity was in keeping with the rainfall. Maximum temperatures were above normal in Bihar and in Orissa, but below normal in Chota Nagpur. In April the rainfall was again below normal and maximum temperatures were above normal. In May a few scattered thunderstorms gave rain in Bihar and also in Orissa but on the whole the total rainfall was below normal as also the humidity. Maximum and minimum temperatures were higher than normal.

(c) *The monsoon period.*—Before the monsoon extended into Bihar and Orissa the province experienced a spell of intensely hot weather with maximum temperature nearly 8° higher than normal. Minimum temperatures were also above normal. The air was much drier than usual and the rainfall for the month was below normal. Monsoon conditions were normal in July and the rainfall, if anything, was in excess of normal especially in Bihar. It was slightly below normal in Orissa. Maximum and minimum temperatures were below normal.

Heavy rain fell in parts of Orissa in August—5" at Cuttack on the 19th and 10" at Sambalpur on the 20th. The total rainfall for the month was as much as 53 per cent above normal in Orissa and 10 per cent above normal in Chota Nagpur. In Bihar, however, the rainfall was very much below normal. Maximum and minimum temperatures were on the whole above normal.

In September a depression in the Bay caused widespread rain throughout the province in the first week of the month, and another depression in the second fortnight of the month produced rain in Chota Nagpur, Orissa and Bihar. On the whole, however, the rainfall during the monsoon period was below normal throughout the province.

(d) *The retreating monsoon period.*—The rainfall in October was normal in Bihar and in slight excess in Orissa and Chota Nagpur. Humidity was above normal in Chota Nagpur and Orissa and maximum temperatures were below normal also.

In November the rainfall was above normal throughout the province and maximum and minimum temperatures about normal.

In December the rainfall was below normal and both maximum and minimum temperatures were above normal.

The average price of common rice varied from 6 seers and 8 chhataks to the rupee in Muzaffarpur to 25 seers 3 chhataks in Angul. In the majority of districts it was over 7 seers, and the price fell towards the end of the year.

The provincial death-rate fell from 29·6 in 1930 to 26·6 in 1931 and 26·8, the average of the last ten years; the birth-rate fell to 33·9 as compared with 36·2 in the previous year and 36·3, the average of the last ten years.

2. SECTION II.—*European Army.*

SECTION III.—*Indian Army.*

SECTION IV.—*Jails.*

These sections are no longer dealt with in provincial Public Health report.

SECTION V.

General Population—Vital Statistics.

3. General census.—

The population of the province according to the census taken in 1931 was 37,677,576 which figure has been used in calculating all the ratios in this report. The population and vital occurrences of the Orissa States are not included in this report.

4. Births.—

The total number of births in this province during the year was 1,276,010 as compared with 1,231,315 in the previous year. The provincial birth-rate for the year 1931 was 33·9 as compared with 36·2 in 1930 and 35·6 in 1929. The average birth-rate for the last ten years was 36·3

Provincial birth-rate.

It should be borne in mind, however, that whereas the birth-rate in 1930 was calculated on the census figures for 1921, i.e., 34,004,546, the rate for 1931 is based on the census figures for 1931, namely, 37,677,576. The population of the province increased steadily in the ten years between 1921 and 1931 and in 1930 it was probably nearer 37,000,000 than 34,000,000. This raises the important question whether vital statistics should not be calculated on an estimated population during the inter-censal years, rather than on the figure for the previous census, as is done at present.

5. Birth Registration.—

The highest birth-rate of the year was recorded in the district of Angul (49·1) and the lowest birth-rate in the district of Singhbhum (26·2); Siwan, Revelganj and Tikari head the municipalities with the high rates of 48·7, 46·8 and 38·7 respectively, whilst Dhanbad, Deoghar and Madhupur have recorded the lowest rates, namely, 0·7, 1·8 and 4·6 respectively.

The general birth-rate for the towns in the province was 20·7 and for the districts, excluding towns, 34·4. The majority of the towns and districts reported rates near the mean figures. The exceptions, both high and low, are few, and the variations occur amongst comparatively small populations and do not greatly affect the average rate.

6. Deaths.—

The total number of deaths in the province during the year was 1,002,699 as compared with 1,006,386 in the previous year. The provincial death-rate for 1931 was 26·6 as compared with 29·6 in 1930 and 26·9 in 1929. The average death-rate for the last ten years was 26·8.

Here again the same error in the method of calculation is evident. There were actually less than four thousand fewer deaths in 1931 than in 1930 and yet there is a difference of . in the mortality rate in the two years—obviously statistics based on an estimated population for the inter-censual years would give more accurate figures.

The reduction in the death-rate as compared with the figures for 1930 is mainly due to a considerable reduction in the number of deaths from cholera which in 1931 was approximately only a quarter of the number in 1930.

7. Death registration.—

The highest district death-rates were recorded in Balasore (35·2), Cuttack (35·0), Gaya (33·5) and the lowest in Singhbhum (14·6), Manbhum (16·6) and Purnea (19·2). Amongst the towns of the province, the highest rates were recorded in Kendrapara (37·4), Revelganj (32·8) and Puri (31·2) and the lowest in Dhanbad (0·8), Deoghar (1·5) and Madhupur (2·9). Obviously these low figures are due to defective registration.

The rate of increase in the population, i.e., the excess of birth-rate over the death-rate in the province was 7·3 as compared with 6·6 in the previous year.

8. Mortality according to age, class and sex.—

The rate of mortality calculated on the census figures of 1931 for children under one year of age amongst male infants was 218·3 and amongst female infants 177·0 per mille as compared with 190·4 and 156·3, the corresponding rates for 1930. But when based on the actual births recorded in 1931, the infant mortality was 154·3 for males and 132·4 for females per mille, with a total infant mortality of 143·6 per mille, against a total infant mortality of 137·8 per mille in 1930. The rate for the urban areas was 156·5 and that for the rural areas 143·3. At the close of the first year of life, the rates fell to 49·3 for males, and 44·4 for females, as compared with 78·6 and 68·2 in the preceding year. There was a fall in all the rates at the other age periods also. The lowest rates were recorded for the age periods between 10 and 15 years as in the preceding year. As usual the total combined mortality amongst males was higher than that amongst females in the ratio of 108 to 100.

There were as usual considerable differences in the death-rates amongst the different classes of the community. The death-rate was highest amongst Hindus (27·9) and lowest amongst Christians (13·9). The Muhammadan death-rate was (20·4) and that of other classes (21·8).

9. Verification of the registration of vital occurrences.—

In the 58 municipal towns, where registration is compulsory, the accuracy of 24,192 vital occurrences was investigated by the health officers of the large towns, and by the officers of the Vaccination Department. Four hundred and eighty-five omissions were detected, 426 prosecutions were instituted, and 249 convictions were obtained. This forms only a very small fraction of the births and deaths in the province, i.e., approximately $\frac{1}{1000}$ of the figure for the whole province, so that if the omissions in rural areas were based on the figure obtained in municipalities, and this would probably be an underestimate, the total error for the province for births and deaths would be approximately 400,000. The registration of vital occurrences is not compulsory in rural areas and the reporting agency in these areas, as well as in most municipalities, is the police. This system, although it obtains throughout India, cannot be said to be satisfactory, more especially with regard to the classification of the causes of death.

There are only three whole-time health officers in the municipalities of Patna, Gaya and Puri in the province, all of whom are paid for by Government, and one part-time health officer at Bhagalpur.

For some two years, or more, an attempt has been made to transfer the responsibility for the collection of vital statistics from the police to the municipal authorities, in the municipalities of Patna and Ranchi. So far the

police in these two municipalities have not been relieved of this duty, and the information has been collected from both sources for purposes of comparison. In Patna the health officer has been made the registrar for vital statistics, and satisfactory results have been obtained. Even in Ranchi, where there is no health officer, there is reason to consider that the figures submitted by the municipality are more accurate than those sent in by the police. The experiment has now been extended to other municipalities, and it is hoped that the responsibility for the registration of vital statistics will shortly be placed entirely in the hands of the municipal authorities.

In rural areas 763 vital occurrences were verified by the vaccination staff as against 4,428 in 1930. In these areas

B.—Rural areas.

the problem is more difficult, but already in districts where health officers are employed, these officers supply valuable information, more particularly with regard to the occurrence of epidemic diseases, from which the Civil Surgeons are able to correct the figures supplied by the police.

10. Publication of vital statistics.—

The preparation and publication every week of the vital statistics of all the municipalities in the province with a population of 20,000 and over have been carried out throughout the year.

Weekly epidemic reports from all districts showing the number of seizures and deaths from cholera, small-pox, plague and influenza are also collected, summarized, and circulated. The reports are published in the Government Gazette, and also by the courtesy of the management, in several newspapers of the province. By the publication of these statistics it is hoped to keep the public informed of the actual state of health of the large towns, and of the prevalence of disease in the districts, and to demonstrate the utility of vital statistics.

SECTION VI.

History of the chief diseases.

11. Comparative incidence of chief diseases.—

The annexed statement compares the ratios under the chief heads of mortality in 1931 with the average ratio of the previous ten years :—

	Urban.		Rural.		Combined.	
	Ten years' average.	1931.	Ten years' average.	1931.	Ten years' average.	1931.
1	2	3	4	5	6	7
Cholera	1·6	0·7	1·9	1·1	1·9	1·1
Small-pox	0·5	0·2	0·4	0·2	0·4	0·2
Plague	0·7	0·06	0·3	0·1	0·3	0·1
Fevers	11·4	7·7	18·2	19·8	18·0	19·4
Dysentery and Diarrhœa ...	1·1	1·0	0·6	0·6	0·6	0·6
Respiratory diseases	0·7	0·5	0·2	0·2	0·2	0·2
Injuries	0·5	0·4	0·3	0·3	0·3	0·3
All other causes	6·8	4·3	4·9	4·7	4·9	4·7
Total	23·4	14·9	26·8	27·1	26·8	26·6

There was a marked decrease in the number of deaths from cholera as compared with the figures for 1930, namely, 40,543 in 1931 as compared with 155,215 in 1930. This reduction in the mortality from cholera was the principal factor in the lower death rate recorded in 1931. On the other hand, the mortality for fevers was appreciably higher in 1931 than in 1930 and the death-rate per mille was 1.4 higher than the decennial figure (18.0).

Although fever is an "omnibus" term, and includes many well recognized diseases where a rise of temperature is an important symptom, there is reason to consider that many districts in the province suffer severely from malaria. Until a more accurate system of recording vital statistics is evolved than what now obtains, it is not possible to estimate the exact part that malaria plays in this high death-rate. Most parts of Orissa, the districts of Singhbhum, Purnea and Bhagalpur are known to be malarious. Several malarial surveys have been carried out both in municipalities and in certain definite areas in well known malarious tracts, and recommendations have been made to improve conditions in the areas investigated. A large amount of Quinine and Cinchona is distributed free to the people in these areas by the district board health organizations.

12. Cholera statistics.—

The provincial death-rate from cholera fell from 4.6 in the previous year to 1.1 in 1931. The district of Gaya recorded the highest death-rate from cholera, namely, 3.0 and amongst the towns, Revelganj (4.3), Chatra (4.3) and Jamalpur (2.8) recorded the highest rates.

13. Cholera in the province.—

Cholera is endemic in most parts of the province, except in the higher tracts in the Chota Nagpur Circle, where it dies out completely in the winter months. In other parts of the province cases occur throughout the year, although there is a marked diminution in the winter, except in Orissa. In the Tirhut and Bhagalpur divisions an increase in the number of cases begins to be noticed about the middle of March—in April this rise is more marked, and by the end of the month the epidemic becomes well established. The incidence and mortality increase in May and June, which are also the months in which the epidemic reaches its peak. With the onset of the rains there is a marked improvement and the epidemic gradually dies down as the winter approaches.

In the Patna division, on the other hand, although cholera may show itself early in the year, as in North Bihar, the highest incidence and mortality are in the months of June, July and August.

In the Orissa districts any month in the year may be the peak month, and the case incidence and mortality in the districts in Orissa would appear to depend more on the large religious festivals and melas, than on climatic conditions, which vary very little during the year.

14. Cholera preventive measures.—

With the growth of public health organizations in districts, there is rapidly being created, in those districts which employ health officers, an efficient and well trained staff to deal with outbreaks as soon as they occur. The more important districts, eleven in number, now have health officers, the salaries of whom are either paid directly by Government or indirectly by means of grants.

Government maintains a permanent staff of epidemic doctors of the assistant surgeon class who are available for duty on demand from any district, and in bad years temporary men are also employed to still further assist local bodies in times of stress.

Provision is also made in the Public Health budget for the employment of 100 epidemic vaccinators. These men are trained in disinfection work, and maintained as a reserve with Civil Surgeons of districts for employment anywhere in the district in emergency. As far as possible, however, district boards

are expected to deal with epidemics with their own health staffs, where such exist, but the Government reserve is always available on demand from the Civil Surgeon or Chairman of the district board.

Government also maintains a reserve of disinfectants, such as Bleaching Powder and Permanganate of Potash with Civil Surgeons, and Kaolin for the treatment of cholera, and these are available to assist local bodies in dealing with epidemics when their supplies run short. Government also supplies cholera vaccine free of charge on demand from Civil Surgeons and Chairmen of local boards. A large supply of this vaccine is maintained in cold storage at the Vaccine Depot at Namkum and orders are placed by telegram for its despatch when required. This free issue of cholera vaccine was begun in 1928 and since that year the demand for vaccine has steadily increased. In 1926 and 1927 when local bodies obtained their supplies on payment the number of doses of vaccine issued was 5,790 and 38,566 respectively. In 1928, 1929, 1930 and 1931 the number of doses issued increased to 240,000, 656,300 731,000 and 666,510, respectively.

Inoculation is not compulsory, and the number of inoculations done therefore vary from year to year. As with vaccination against small-pox the demand for inoculation is to some extent dependent on the presence of cholera, and the virulence of the outbreak. But the steady progress that has been made with this preventive measure is an indication of its appreciation by the masses, and there are indications now that when the cholera season approaches people will come forward for inoculation, if the effort is made to carry out this preventive measure, even when cholera is not present in the area. As soon as a case occurs this demand increases.

Preventive inoculations are carried out at all important melas, special attention being given to Puri during the important Car Festival. Details of this are given elsewhere.

As was anticipated the severe epidemic of cholera in 1930 was followed by a comparatively mild year in 1931, the death-rate being approximately one-fourth of that in the preceding year. The districts in North Bihar that suffered most heavily in 1930 were least affected in 1931. This was particularly noticeable in the districts of North Bihar in the Tirhut and Bhagalpur divisions.

The following table will show at a glance the difference in the two years :—

COMPARATIVE TABLE FOR 1930 AND 1931.

Districts		Total number of deaths in 1930.	Total number of deaths in 1931.
Tirhut Division	{ Saran ...	5,277	2,017
	{ Champaran ...	15,318	613
	{ Muzaffarpur ...	38,017	264
	{ Darbhanga ...	46,088	978
Total for Division ...		104,700	3,872

District.		Total number of deaths in 1930.	Total number of deaths in 1931.
Bhagalpur Division	{ Monghyr	13,902	4,093
	{ Bhagalpur	7,012	3,933
	{ Purnea	5,609	413
	{ Santal Parganas	573	1,371
Total for Division		27,096	9,810

It will be seen that with the exception of the Santal Parganas in the Bhagalpur division, all the other districts show a marked reduction in the number of deaths from cholera in 1931, and that the reduction is most striking in the districts that were most heavily infected in 1930.

In the South Bihar and Chota Nagpur divisions the incidence of cholera was about normal and did not vary a great deal from the figure in 1930.

Thus in the Patna division, which is comprised of the districts of Patna, Gaya and Shahabad, there were 15,949 deaths in 1931 compared with 15,759 in 1930. The Patna and Gaya districts recorded a slightly lower figure in 1931 than in 1930, and in the Shahabad district the total mortality in 1931 was 1,112 greater than the 1930 figure.

There was very little cholera in the Chota Nagpur districts, the total mortality in the whole division being 2,559 against 3,494 in 1930.

In the Orissa Division, however, where cholera had been comparatively mild in 1930, the total number of deaths in 1931 was more than double the figure for 1930, viz., 8,753 in 1931 as compared with 4,166 in 1930.

The use of Bacteriophage.—

As a result of the encouraging results obtained from experiments controlled by Dr. I. N. Asheshov with bacteriophage in the two previous years at Puri during the great Car Festival there, it was decided to still further try out bacteriophage by extending the experiment to two whole districts in North Bihar. The districts of Muzaffarpur and Purnea were selected for the experiment for the following reasons :—

- (1) Because they are regarded as the worst cholera districts in their respective divisions of Tirhut and Bhagalpur.
- (2) Each of these districts has a well organized health staff through whom it was proposed to distribute bacteriophage, both for preventive and curative purposes, and to obtain fairly accurate data regarding the case incidence and mortality from cholera.
- (3) The two districts are relatively well provided with roads, except in one section of Purnea, which render most villages in the district fairly easily accessible.

The lines on which the experiment was to be worked was discussed fully by Dr. Asheshov with the public health authorities, and with the health officers of the two districts. The health officers of the districts were made mainly responsible for the distribution of bacteriophage, and the Assistant Director of Public Health, North Bihar Circle, was in control of the arrangements, and generally supervised and checked the statistics supplied by the health officers.

During the whole course of the experiments, no inoculations were carried out in either district, and no disinfectants were used. Essential oil mixtures for the treatment of cases were not permitted, and as far as possible bacteriophage alone was used for the treatment of cases.

Arrangements were made to get early information of the occurrence of cases through village chaukidars, but it was soon seen that reliance on this agency alone would not prove successful—the whole of the subordinate health staff was then detailed to help in reporting outbreaks rapidly. This health staff was provided with bottles containing bacteriophage, and as soon as a case of cholera was discovered, the patient himself, and all contacts received a dose of it, and all wells in the neighbourhood were treated with phage.

In the Muzaffarpur district 22 police-stations were affected with cholera and a total of 988 attacks and 264 deaths were reported for the period the experiment was being tried. Of this number 729 cases were treated with bacteriophage of whom 63 died, i.e., a percentage of 8·6 deaths—259 cases received no bacteriophage and 201 of these died, i.e., 77 per cent.

In the Purnea district outbreaks of cholera were reported from 14 police-stations and there were altogether 726 attacks and 413 deaths—of this number 350 cases were treated with phage of whom 121 died, i.e., 34 per cent. The remaining 376 cases received no bacteriophage and 292 or 77·4 per cent of them ended fatally.

The health officer of the Purnea district reported that the relatively high percentage of deaths amongst the cases treated with bacteriophage as compared with the figures obtained in the Muzaffarpur district was due to the delay in getting the phage to them—the bulk of these cases occurring in the section of the district that is not easily accessible, especially in the monsoons. This statement was corroborated by the Assistant Director of Public Health, North Bihar Circle.

The experiment brought out many interesting facts some of which are :—

- (1) It was definitely established that the duration of an epidemic was considerably shortened when bacteriophage was used. Thus the average duration of a cholera epidemic in a thana area where the usual methods of dealing with an outbreak are employed has been estimated as 83 days. In these two districts where bacteriophage was used the epidemic subsided completely in 14 days. Similarly, in village the average duration of an epidemic has been estimated as 23 where the usual methods are employed, whereas it only lasted 3 days in villages in these two districts where bacteriophage was used.
- (2) Although cholera was not as severe as usual in 1931, it will be seen from the tables given in the preceding pages that the mortality from cholera in these two districts was not only the lowest amongst the districts in their respective divisions, but the lowest in the whole of North Bihar.
- (3) Financially there was a considerable saving of money to the two district boards, as no disinfectants, and no other remedies for the treatment of cholera were purchased. Government was also saved the cost of cholera vaccine which would otherwise have had to be supplied to the districts.
- (4) Bacteriophage is tasteless, colourless, and odourless, and not only was the treatment of wells with it not objected to, but the villagers actually asked for it when they had once had it in their wells—a very different story to what happens when an attempt is made to chlorinate wells.

Unfortunately no very spectacular result was obtained during the year under report with bacteriophage. It was a mild cholera year and although other districts in North Bihar reported more attacks and deaths than these two districts, their figures were also lower than usual. A conclusive verdict in favour of its adoption throughout the province has been deferred, and the experiment is being continued in the same two districts in 1932.

Bacteriophage was extensively used at Puri during the great Car Festival in 1931 and an attempt was made to distribute the phage to all parts of the province, and other parts of India, through the pilgrims who visited Puri, by

the introduction of it into the drinking water supplies at the important railway stations on the Bengal Nagpur Railway. This will be dealt with more fully in a later section.

15. Small-pox.—

The death-rate from this disease in 1931 was the same as in 1930, namely, 0·2, but there is evidence which indicates that the usual quinquennial increase is approaching. The last epidemic began in 1925 and reached its peak in 1927-28. The districts of Orissa were most heavily affected then.

In 1931 the districts of Sambalpur and Cuttack recorded the highest death-rates from this disease, namely, 1·3 and 0·5 respectively. In the Shahabad district a mortality rate of 0·4 was recorded. These were the highest figures recorded for the year.

The following districts returned the lowest death-rates from small-pox :—

Ranchi 0·04, Muzaffarpur and Purnea 0·05.

In town areas small-pox was most severe in Sambalpur and Chaibassa which returned death-rates of 3·7 and 2·1 respectively.

The total number of deaths from this disease in 1931 was 8,028 as compared with 7,455 of the previous year.

Vaccination was only compulsory in two districts in 1931, and in a few localized areas in other districts. It has been compulsory in municipalities for many years. Efforts are being made to extend the Vaccination Act to other districts and the report for 1932 will contain a much longer list of districts where vaccination is compulsory.

The protective value of vaccination against small-pox is well recognized by the people, and this is proved by the great demand for vaccination when small-pox appears in a village. But in the absence of the disease the people resort to all kinds of devices to evade the ministrations of the vaccinators—this is particularly so in Orissa, and amongst the aborigines of Chota Nagpur. The only remedy is compulsory vaccination, and this will now soon be in force in a large number of districts.

So far the control and supervision of vaccination have been entirely the concern of Government. Government maintains a staff of vaccination inspectors in all districts who supervise the work of the vaccinators under the direction of the Civil Surgeons, who are the Superintendents of vaccination in the districts. The Assistant Directors of Public Health tour in their respective circles during the winter months and inspect and report on the work that has been done.

With the introduction of compulsory vaccination, and the extension of sections 92 to 96 of the Local Self-Government Act, the control will pass from the Civil Surgeons to the local authorities, and the health officer of the district will become the Superintendent of vaccination. This has already happened in the Patna district. A further step in this change of control will be the substitution of the Government inspecting staff by the health inspectors of the district board health organizations. This has also been effected in the Patna district, and steps are now being taken to train the health staff of other districts, where the Act has been extended, in the duties connected with vaccination inspection. It is hoped that the Government staff will be relieved in many districts in the course of the next year. Government, however, will still exercise control over this important public health measure through the Assistant Directors of Public Health. Vaccine lymph manufactured at the depot at Namkum is supplied free throughout the province.

16. Fever statistics.—

The death-rate from fevers during the year 1931 was 19·4 as compared with 18·9 in 1930 and the decennial average of 18·0.

The highest mortalities were recorded in the districts of Palamau (25·5), Muzaffarpur (24·9) and Angul (24·4) ; and amongst towns, Tikari 26·3, Colgong 18·7 and Gaya 18·4.

As has already been stated Fever is an "omnibus" term and a large number of deaths from other diseases in which a rise of temperature has been a symptom is included under this head. The village chaukidar is the reporting agency in rural areas, and no very great accuracy in the matter of diagnosis can be expected from him. Health Officers of districts are making some effort to improve the classification of the causes of death, but until medical men can be induced to settle in rural areas no very great improvement can be expected.

Malaria is undoubtedly prevalent in certain districts, notably Singhbhum in Chota Nagpur, all the districts of Orissa, the Purnea district and parts of the Bhagalpur district, and is probably responsible for a large number of the deaths recorded under "Fever". But Blackwater fever is not uncommon in parts of Singhbhum, and Kala-azar is fairly prevalent in the Gangetic plain throughout the province.

A malaria survey of the town of Purnea was completed during the year under report by Dr. Chatterji, Assistant Director of Public Health, North Bihar Circle and certain of his recommendations are now being carried out.

All the Assistant Directors in the province have now received special training in malaria at Karnal and are qualified to undertake surveys in their respective circles.

The district board authorities distribute Quinine and Cinchona, through their health staff, in infected areas but for want of money no extensive anti-malarial schemes have been carried out.

For some years now the Assistant Directors of Public Health have been recording the Spleen index amongst children brought to them for inspection during their vaccination tours, and fairly accurate statistics are now available for most parts of the province.

17. Sale of Quinine.—

The sale of quinine treatments at the various post offices in the province has been in force for many years. These treatments are supplied to the post offices by the Civil Surgeons, who obtain their requirements from the Presidency Jail at Calcutta, where the products of the cinchona plantations in Bengal are made up into tablets. Twenty tablets packed in small glass tubes constitute one treatment. These treatments are now sold by the post offices at $5\frac{1}{2}$ annas per treatment, but the amount purchased annually cannot be regarded as satisfactory.

The sale of quinine treatments during 1931 amounted to a total of 536.4 pounds of quinine sulphate as compared with 501.2 pounds in the previous year. The largest quantities were taken by Cuttack, Purnea, Champaran, Singhbhum, Ranchi, Puri, Balasore and Santal Parganas districts. Quinine was chiefly sold through the agency of postmasters, and to a small extent through other agencies.

18. Free supply of quinine to schools.—

During the fever season, quinine was supplied free to certain schools for the use of scholars in the districts of Muzaffarpur, Hazaribagh, Ranchi, Cuttack, Puri, Balasore, Sambalpur, Purnea, Monghyr, Bhagalpur, Santal Parganas, Darbhanga, Singhbhum, Champaran, Saran and Angul.

Out of the total number of 9,140 scholars in those schools, 3,483 received quinine regularly; 94,647 tablets of quinine of four grains each were consumed by the scholars.

19. Plague statistics.—

The death-rate from plague for the year 1931 was 0.1 as compared with 0.1 in the previous year; the average rate for the last ten years was 0.3. The disease is practically confined to the districts north of the river Ganges, and there were only a very few cases in the Patna and Gaya districts during the months of January to April.

The districts of Muzaffarpur, Darbhanga and Saran suffer most, and record the largest number of deaths. The disease is confined to the winter months and dies out completely in the hot weather and rains. As there is very little cholera in the province during the winter months the Government cadre of epidemic doctors are always available for plague duty during these months.

A fairly sharp outbreak of plague was reported from the Sadr subdivision and the Beguserai subdivision of the Monghyr district, and Government epidemic doctors had to be despatched to deal with the situation. Anti-plague vaccine is stocked at the Vaccine Depot at Namkum and this is supplied free on demand by telegram to local bodies.

The districts which reported the highest mortality were Muzaffarpur (0·6), Saran (0·5) and Darbhanga (0·4) and the towns which suffered most were Roserah (5·3) and Hajipur (0·6). The rate of mortality in towns was 0·06 and in rural areas was 0·1.

20. Dysentery and Diarrhœa.—

The death-rate from dysentery and diarrhœa was 0·6 as compared with 0·5 in the previous year, and an average rate of 0·6 for the last ten years.

As usual this disease was most prevalent in the Orissa Division, and of the total deaths amounting to 24,085 this division reported 19,107.

The towns which recorded the highest death-rate from these diseases were Puri (6·4), Kendrapara (5·8), Revelganj (4·2), Jajpur and Sambalpur (2·9).

The prevalence of dysentery and diarrhœa in Orissa is probably associated with the climatic conditions, and is to a large extent due to the bad state of the water-supply in many parts of this division.

Malarial fever is also very prevalent in Orissa, and its victims are rendered weak, debilitated, and anæmic, and less able to resist subsequent attacks of these more fatal diseases.

These diseases resemble cholera in their nature and in their incidence. They belong to the group of intestinal diseases, the transmission of which is associated with the infection of the individual by contact, or with the contamination of the water-supplies by excreta, or of food by flies. They tend to become epidemic under the same conditions and by the same means which favour the spread of cholera, and their prevention, like that of cholera, can best be effected by the improvement of water-supplies, by better conservancy and by prompt disinfection of the excreta of the sick.

SECTION VII.

History of Vaccination.

21. The annual vaccination report is submitted as an annexure to this report.

SECTION VIII.

Sanitary Works (Military).

22. This section is no longer dealt with in provincial Public Health reports.

SECTION IX.

Sanitary Works (Civil).

23. General.—

The figures given in paragraphs 25 and 27 relate to the financial year 1930-31.

24. Expenditure on sanitation in municipal towns.—

The statement below shows the receipts and the expenditures for sanitary purposes during the year 1930-31 as compared with those of the previous year :—

Number of municipalities.	Total receipts including opening balance.		Heads of Expenditure.	1929-30.	1930-31.	Percentage of expenditures to the total receipts.	
	1929-30.	1930-31.				1929-30.	1930-31.
1	2	3	4	5	6	7	8
	Rs.	Rs.		Rs.	Rs.		
58	55,55,475	61,15,933	Conservancy ...	11,37,290	11,30,534	20.4	18.4
			Drainage ...	1,13,968	1,71,205	2.0	2.8
			Water-supply ...	3,07,990	4,84,390	5.5	7.9
			Vaccination ...	14,667	14,719	0.2	0.2
			Epidemics ...	28,907	27,383	0.5	0.4
			Markets and fairs ...	66,469	47,225	1.2	0.7
			Other sanitary charges ...	2,899	2,155	0.05	0.03
			Public Health staff ...	48,841	45,106	0.8	0.7
			Total ...	17,21,031	19,22,717	30.9	31.4
			* Contagious diseases hospitals.	2,08,120	1,89,721	...	...

* This represents cholera hospitals and leper asylums, etc. An expenditure of Rs. 1,89,721 has been incurred in 1930-31. The expenditure is mainly met from Government grants.

25. Chief sanitary works in municipal towns.—

The details of expenditure under this head are dealt with in the report of the Superintending Engineer, Public Health Department.

26. Expenditure on sanitation by district boards.—

The following statement shows the receipts and expenditures of district boards under the principal headings of sanitation.

Number of district boards.	Total receipts including opening balance.		Heads of expenditure.	1929-30.	1930-31.	Percentage of expenditures to the total receipts.	
	1929-30.	1930-31.				1929-30.	1930-31.
1	2	3	4	5	6	7	8
	Rs.	Rs.		Rs.	Rs.		
19	1,82,60,110	16,68,348	Conservancy ...	3,61,603	3,26,445	1.9	1.9
			Drainage ...	18,685	30,060	0.1	0.1
			Water-supply ...	2,22,307	1,55,920	1.2	0.9
			Vaccination ...	21,985	20,744	1.2	1.2
			Epidemics ...	77,369	71,175	0.4	0.4
			Markets and fairs ...	22,470	39,211	0.1	0.2
			Other sanitary charges...	99	24	0.00005	0.0001
			Total ...	7,24,518	6,43,579	3.9	3.8

SECTION X.

*Personnel, proceedings and progress.***27. Director and Assistant Directors of Public Health.—**

The office of the Director of Public Health was held by Major S. L. Mitra, I.M.S., up to the 8th October. Lt.-Col. J. A. S. Phillips, I.M.S., returned from leave and took charge on the 9th October and was in charge for the remaining period of the year.

Of the Assistant Directors of Public Health, Dr. R. M. Prasad was in charge of the South Bihar Circle throughout the year.

Dr. A. N. Chatterji was in charge of the North Bihar Circle throughout the year.

Dr. B. P. Mozoomdar was in charge of the Chota Nagpur Circle throughout the year.

Dr. J. L. Das was in charge of the Orissa Circle throughout the year except for the period from the 3rd November to the 23rd December when he was on leave and Dr. B. P. Mozoomdar was in additional charge.

28. Touring.—

During the year, the Director of Public Health remained on tour for 65 days as compared with 76 days in the previous year, and the Assistant Directors of Public Health of the North Bihar, South Bihar, Chota Nagpur and Orissa Circles for 157, 112, 134 and 128 days, respectively, as compared with 174, 121, 187 and 118 days in the previous year.

29. Municipal inspections.—

During the year under report 44 out of the 58 municipalities in the province were inspected by the Assistant Directors of Public Health and full reports on these inspections were submitted to Government.

The financial position of these towns remains unchanged and there is little prospect of the employment of health officers in the larger towns at present.

Action is taken on the recommendations of the Assistant Directors where no heavy expenditure of money is involved, but there is still room for considerable improvement, more especially in the congested parts of the towns. Several schemes for improvement in drainage are being held up for want of money. Motor transport is now being employed in some of the larger municipalities, and the town of Bhagalpur has now been added to the list of towns where motor lorries are used for the removal of rubbish.

30. Inspections of schools and unions.—

Since 1920 Government have employed a special staff of officers for the medical examination of school children in high schools. These examinations have been more recently extended to middle schools also. In certain districts arrangements have been made for the examination of children in primary schools by the health officer of the district.

This subject is more fully dealt with in a later section.

Assistant Directors of Public Health are also required to inspect and report on high schools in their respective circles. They check the work of the School Medical Officers, and also report on the general sanitation of the school buildings. During the year under report 37 high schools were inspected by the Assistant Directors of Public Health and reports were submitted on these inspections.

It is only of recent years that the number of village unions has increased. Efforts are being made to improve the sanitation in these areas. The Assistant Directors of Public Health make regular inspections and assist the local authorities in their efforts to improve matters. The Union Committees are handicapped for want of funds. They receive small grants from the

district boards, but seem reluctant to increase their resources by any kind of direct taxation. Some little progress is reported in most of these unions, but until money is available no substantial improvements can be expected.

31. Lectures and magic lantern demonstrations.—

In addition to propaganda work done by the officer in charge of the Publicity Bureau, the Assistant Directors of Public Health take advantage of every opportunity that offers to lecture to the people on public health subjects. They are all provided with magic lanterns and complete sets of slides on all aspects of public health. Regularly organized lectures and magic lantern demonstrations are delivered at all the important melas.

The Public Health Department is constantly being called upon by the Co-operative Societies to deliver lectures and demonstrations at their meetings, and whenever possible these requests are complied with. The epidemic doctors also have opportunities for propaganda work when employed in rural areas on epidemic duties—indeed the success that has been achieved in popularizing inoculations, both with cholera and plague vaccines is due in no small measure to their efforts.

32. Special duties and reports. —

In addition to the routine work mentioned in this report and the vaccination report, the officers of the department carried out many special duties.

All the larger melas in the province were visited by the Assistant Directors of the circles concerned, more particular attention being paid to the three important ones, namely, the Rath Jatra at Puri, the Pitripaksh at Gaya, and the annual fair at Sonapur, and the Director of Public Health attended the Rath Jatra and Sonapur melas.

The usual arrangements were made for the prevention of cholera at these three melas, and a special staff of epidemic doctors was deputed to carry out inoculations, and to supervise the sanitary arrangements. These epidemic doctors worked under the direct control of the Assistant Directors of Public Health who were present throughout the mela.

The Assistant Director of Public Health, North Bihar Circle, attended all the important melas in his circle and assisted the local authorities in the arrangements that were being made for these melas. The Khagra mela in the Purnea district, the Ramnavami mela at Sitamarhi and the Sonapur fair were the more important of these melas. He was present throughout the mela period at Sonapur and was of considerable assistance to the local authorities.

He inspected and reported on the public health organizations of all the districts in his circle, and discussed and offered advice in all districts where the Vaccination Act is to be extended.

The experiments with Bacteriophage were carried out under his direct supervision in the Muzaffarpur and Purnea districts, and a good deal of the success achieved must be attributed to the control he exercised. He investigated most of the outbreaks of cholera and plague and helped the district authorities with advice on the best methods to be adopted to deal with them.

The Assistant Director of Public Health, Chota Nagpur Circle, held charge of the Vaccine Depot at Namkum in addition to his other duties, and was responsible for the despatch of small-pox lymph, cholera, plague and influenza vaccines. He investigated a small outbreak of cholera in the town of Ranchi, and another outbreak in the Hazaribagh district. During his vaccination tour he carried out a spleen census amongst children in the districts of Ranchi and Manbhum.

Certain experiments with vaccine lymph in varying dilutions were carried out under his supervision.

The Assistant Director of Public Health, Orissa Circle, attended the many melas in the town of Puri, and was present there throughout the Car festival, which was of special importance in the year under report on account of the Nabakalebar ceremony. The number of pilgrims was a great deal larger than usual, and his supervision and control of the sanitary measures that were taken were partly responsible for the success that was achieved.

He delivered 137 lectures during his vaccination tour and investigated many of the outbreaks of cholera in his circle, and an outbreak of Typhoid fever in the town of Angul.

The Assistant Director of Public Health, South Bihar Circle, was present at the Rajgir mela and the Pitripaksh mela at Gaya and supervised the sanitary measures taken at these two melas. He investigated an outbreak of plague in the Beguserai subdivision of the Monghyr district.

33. Health Officers.—

(a) *In Municipalities.*

The year under report saw a further reduction in the already small number of health officers in municipal towns. The municipal authorities of Muzaffarpur dispensed with the services of their health officer for reasons of economy. There has been much talk of recent years of the growth of a "sanitary conscience" in India, but this growth is lucky if it escapes the attentions of the "Retrenchment axe" in these days of financial stringency. It has been subjected to considerable pruning and in many cases has been removed altogether. Thus two districts have lost practically the whole of their public health staff within recent years, and Muzaffarpur has lost its health officer. Considerable reductions have also been affected in the Jharia Mines Board of Health. The function of a health organization is to improve the sanitary condition of the area in which it works and thus protect human life. But apparently it does not pay to render conditions too healthy, for when the necessity arises for economy the health staff that have been responsible for the improvement in health are no longer considered necessary. In this connection the attention of those concerned might be drawn to the old Chinese principle of only paying a doctor his fees as long as he keeps the people healthy.

There are now only three whole-time health officers of municipalities in the towns of Gaya, Patna and Puri, and one part-time health officer at Bhagalpur. The former are all paid for by Government, and the latter receives a small remuneration from municipal funds for his part-time services. The absence of health officers in municipalities is most acutely felt when there is an outbreak of an epidemic disease in these towns. The sanitary inspectors are generally incapable of dealing with such an outbreak, and the services of an epidemic doctor has to be requisitioned from Government. This ought not to be the case, every municipality should be able to deal with such outbreaks with its own staff, and Government epidemic doctors should only be necessary in rural areas where there are no medical men and a paucity of health inspectors.

(b) *In Districts.*

With the abolition of the health organizations in the districts of Manbhum and Hazaribagh, only ten districts at the beginning of the year under report had health officers. Later, however, one more district, namely, Champaran, was given a Government paid health officer on condition that the rest of the staff was provided by the district board. At the close of the year therefore eleven districts were working with a fully organized health staff. Of this number the districts of Puri, Cuttack, Balasore, Purnea, Darbhanga and Patna have health officers appointed by the boards concerned—and Gaya, Bhagalpur, Muzaffarpur, Saran and Champaran have been provided with Government paid health officers.

Each of the remaining ten districts has a small nucleus of a health organization, and recruits more staff when the emergency arises, or applies to Government for the loan of epidemic doctors when an epidemic occurs. The advantages of having a fully organized health staff under a qualified health officer are obvious. Success or failure in dealing with an epidemic depends on the rapidity with which intelligent preventive measures are taken, and if a staff is always available for such preventive measures, success is assured.

Efforts are being made to place a few more Government paid health officers in districts where there are none, but a health officer by himself would be of little use, and these men will only be forthcoming when the district boards concerned will provide an adequate subordinate staff.

In the eleven districts mentioned above much useful work was done in the prevention of disease, and in the education of the people in public health subjects. Several of the health officers have undertaken the medical examination of school children in schools not visited by the Government School Medical Officers.

The Assistant Directors of Public Health report on these health organizations and emphasize the progress that is being made from year to year in every branch of public health, more especially in the prevention of disease.

A very large number of inoculations with cholera vaccine was performed by the health staff of districts, and with plague vaccine in those districts where this disease appears in the winter months.

34. School Medical Inspection.—

The system of school medical inspection which was started as an experimental measure is now a permanent feature of the public health activities of the province.

There is a School Medical Officer of the Assistant Surgeon grade and an Assistant School Medical Officer of the Sub-Assistant Surgeon class in each of the five divisions of the province.

One Lady School Medical Officer was employed during the year under report for girls' schools throughout the province.

These officers inspect the scholars of all high schools and most of the middle schools of their respective divisions, and record their findings in certain standardized forms. Their duties are of a three-fold nature :—

- (1) The medical inspection of all scholars.
- (2) The inspection of school buildings.
- (3) The delivery of a series of lectures on hygiene.

1. *The medical inspection of scholars :—*

- (a) All new scholars admitted to the school since the previous visit of the medical officer, are thoroughly examined and a complete medical history of each is recorded on the prescribed form.
- (b) All scholars found to be suffering from physical defects at a previous inspection are re-examined, and a further note on the particular defect is recorded.

At the end of the inspection parents or guardians of children found to be suffering from physical defects are informed of the particular defect the boy is suffering from, and they are recommended to consult their medical attendant or take the child for treatment to the nearest dispensary. This information is given on a prescribed form. Another form is used for the poorer children and is addressed to the medical officer in charge of the local hospital or dispensary. The medical officer is asked to note on the counterfoil of the form the treatment the boy has received.

The following is a statement showing the number of children examined by each of the School Medical Officers and the number of defectives found:—

Division.					Total number of children examined.	Total number of defectives.
Patna	...	...	...	...	3 096	1,678
Tirhut	...	...	...	...	2,511	1,473
Bhagalpur	...	...	...	...	3,096	1,488
Orissa	...	...	...	...	3,099	1,839
Chota Nagpur	...	...	...	...	2,067	910

The Lady School Medical Officer examined a total of 1,359 children and reported 68 per cent to be suffering from some kind of physical defect.

The bulk of these defects are of a minor nature, such as caries of the teeth, skin diseases, enlarged tonsils, etc., but major defects such as defective vision, heart affections, etc., were also brought to light, and to the notice of the parents or guardians.

A few cases of early tuberculosis and leprosy were also reported by all the School Medical Officers, and the importance of early diagnosis in these diseases, and prompt and suitable treatment when they are detected cannot be exaggerated.

2. *The inspection of school premises.*—These inspections and the reports on them have resulted in many minor improvements in school buildings and hostels.

3. *Lectures on Hygiene.*—These are fairly comprehensive and are illustrated in many cases by magic lantern demonstrations. Attendance at these lectures is compulsory, but as hygiene is neither a compulsory nor an optional subject in the Matriculation examination, the lectures do not receive quite the attention they deserve. They however afford an excellent opportunity for the propaganda of knowledge and information on public health and ought to produce some results.

During the school vacation the School Medical Officers delivered lectures on hygiene and public health to primary school teachers and *gurus* under arrangements made in consultation with the Inspectors of Schools.

35. The Epidemic cadre of Assistant Surgeons.—

Government maintains a cadre of thirteen officers for epidemic duty throughout the province. When cholera is prevalent temporary men are also recruited by Government, and these officers are sent out on demand from Civil Surgeons or Chairmen of district boards and municipalities to help in dealing with epidemics. In 1931, in addition to the thirteen permanent officers, seventeen temporary officers were also employed at various times during the year.

In addition to these medical officers Government maintains a reserve of one hundred epidemic vaccinators trained in disinfection work. These men are allocated to Civil Surgeons at the beginning of the cholera season, and are available for immediate despatch to any part of the district when an outbreak of cholera occurs. Civil Surgeons are also provided with a reserve of disinfectants—bleaching powder and permanganate of potash and kaolin for the treatment of cholera.

36. Public Health Bureau.—

Dr. S. K. Chatterji was in charge of the Provincial Publicity Bureau throughout the year. Many articles on public health subjects were prepared for publication in the local press, and pamphlets and posters were issued to local bodies; a new series of coloured posters were prepared and are now available for distribution.

Dr. Chatterji carried out as usual the lectures on hygiene to the police probationers at Hazaribagh and at the constables' class at Nathnagar.

37. Village sanitation.—

Where district health organisation exists some effort is being made to improve the sanitation in villages, but progress is slow. The Assistant Directors of Public Health inspected 24 unions during their winter tours.

38. Sanitation of fairs and melas.—

A large number of melas are held every year in different parts of the province. Many of these are of purely local interest, and are attended by the people of the district in which it is held, and adjoining districts.

The two sacred Hindu towns of Gaya and Puri attract pilgrims throughout the year. In the former town the largest collection of pilgrims assemble there for the Pitripaksh mela held in September. Whilst the three largest melas at Puri are the Dol Jatra, the Snan Jatra and the Rath Jatra or Car festival, the latter being the most important, and attracts pilgrims from all over India.

The Sonepur fair held in the Saran district in November is largely a cattle fair. An important bathing festival takes place there about the same time, however, and for about ten days a large number of people visit Sonepur.

At Puri the year under review was of special interest as the Nabakalebar ceremony had to be performed during the Rath Jatra. The ceremony, which consists in the complete renovation of the wooden figures representing the three deities in the temple of Jagannath, is performed at long intervals, generally about 18 years. The last ceremony of the kind took place in 1912. Pilgrims to Puri in these years acquire special merit, and the attendance in these years is usually more than double that of an ordinary year. In 1912 the total number of pilgrims estimated to have visited Puri was about 250,000 but no details of these figures are given. It is not easy to arrive at the figures for 1931 but the following is considered to be a fairly accurate estimate :—

Brought by rail with and without ticket	...	...	...	73,550
Came by road	...	...	...	50,000
Normal population of town	...	...	...	38,000
Total				161,550

To prevent a recurrence of what happened at Puri after this ceremony in 1912, when no less than 1,053 deaths were recorded in the town itself, and the serious epidemic which followed in the Puri and neighbouring districts, special measures were taken by the Public Health Department, the municipality, the district board and the Bengal Nagpur Railway authorities.

Government sanctioned the employment of a special temporary staff of doctors for the supervision of the sanitation in the town, for inoculation in the town and at the railway station at Puri, and for inoculation duty at Cuttack and Balasore. The municipality engaged an extra staff of sweepers for the sanitation of the town. The district board established inoculation centres along the roads traversed by pilgrims from the district, and the railway authorities arranged for the inspection of pilgrims travelling by rail at the important junction stations, established eight disinfecting stations between Kharagpur and Puri, and provided sheds for camps and camp hospitals at certain stations where hospital accommodation did not exist.

The Engineering Branch of the Public Health Department installed six engine-driven pumps with connected tanks and taps at six of the more important wells, and ten hand pumps at other wells, and the municipality arranged for hand pumps at sixteen other wells and sank 31 small tube wells.

Except in wards 4 and 5 of the town, where Bacteriophage was used, the whole of the remaining wells were chlorinated throughout the mela period.

Inoculations with cholera vaccine were commenced in April in the town of Puri amongst the permanent residents, and as the immunity conferred by these early inoculations persisted through the mela period these figures are

included in the totals given below. The figures however for the district are only those done amongst definite pilgrims to Puri for the Rath Jatra—

Total number of inoculations done in the town ...	...	34,226
Total number of inoculations done in the district	...	43,249
		<hr/>
Total	...	77,475

In addition to these figures a total of 6,643 inoculations were carried out in the Cuttack and Balasore districts amongst pilgrims proceeding to Puri, so that the total number of inoculations carried out in the province in connection with this festival was 84,120. This does not include the number inoculated by the Public Health Department of Bengal.

An attempt was first made to protect pilgrims attending Puri for the Snan Jatra and Rath Jatra in 1927 and the following figures are of interest as they illustrate the steady progress that has been made with this important preventive measure. These figures are only for the town itself, and for a short period immediately preceding the Snan Jatra and following the Rath Jatra.

Year.	Number of inoculations.				
1927	7,937
1928	16,869
1929	32,155
1930	42,047
1931	34,226

The figure for the town in 1931 would have been still higher, if the district board arrangements for the inoculation of pilgrims travelling by road had not been so complete.

There was no little anxiety in the Public Health Department during the course of the mela. Cholera was prevalent in all the districts of Orissa, more especially in the district of Puri itself, and cases of cholera were actually occurring in Puri town at the time. But the elaborate precautions taken, and the thorough arrangements made were entirely successful as the following figures show. There were only 73 cases of cholera in the town during the mela, i.e., up to 31st July, and only 9 deaths as against 1,053 deaths in 1912.

The success of the inoculation campaign was even more complete than in other years as the following table will show. Estimating the population during the melas as 161,550—

—				Numbers	Attacks.	Deaths.	Percentage of deaths to attacks.
1				2	3	4	5
Inoculated	...	...	...	84,120	17	Nil	...
Uninoculated...	...	...	...	77,430	56	9	16 per cent.

A further experiment with Bacteriophage was carried out in Puri during the Rath Jatra. The wells of two of the wards into which the town is divided were treated with Bacteriophage, the remaining four wards acted as a control, and in these other wards the usual method of sterilizing the well water by chlorination was resorted to. The experiment was successful, and as these two wards include most of the area traversed by the car, and are therefore more favoured by the pilgrims, it is more than likely that the bacteriophaged water of the wells in these wards was drunk by pilgrims and

others actually living in other parts of the town. This may have partly accounted for the few cases of cholera that occurred during the mela.

In consultation with the railway authorities the water-supplies at the following railway stations were regularly treated with Bacteriophage at the time the pilgrims were returning to their homes :—

Puri, Sakhigopal and Khurda Road.

The object of this was of a two-fold nature.

(a) to protect the returning pilgrims themselves.

(b) to distribute Bacteriophage in the villages in the interior to which the pilgrims were returning.

The Railway authorities report that only two cases of cholera were removed from trains carrying pilgrims from Puri in the whole length of the line.

Pitripaksh mela at Gaya.—The usual arrangements were made at Gaya for the Pitripaksh mela, which passed off successfully. Four pilgrims and seven residents were attacked with cholera during the mela, which resulted in the death of the four pilgrims. There were no deaths amongst the residents attacked.

The infected lodging houses were promptly disinfected and no real epidemic occurred.

Scenepur fair.—This is almost entirely a commercial fair where cattle, horses and elephants are brought for sale. An important Hindu bathing ceremony takes place during the fair, which attracts thousands of pilgrims from the neighbouring districts. The site of the mela is a bare plain for eleven months of the year, which for one month, usually November, becomes covered with huts and tents and is visited by many thousands of people.

Similar arrangements were made here by the Public Health Department and the district board authorities as in previous years, but as it was held this year when cases of cholera were still occurring in the neighbouring districts, all the wells and tanks were treated with Bacteriophage, with the idea of preventing an outbreak locally, and disseminating the Bacteriophage through the visitors returning to their homes.

New sheds have recently been constructed for the accommodation of cases of infectious disease, and a permanent water-supply from deep borings has been arranged which is distributed by means of pipes and hydrants throughout the mela area. These two improvements were carried out during 1929.

Other important melas in the province are the Sivaratri mela at Deoghar, the melas at Hijla in Manbhum and the Singheshwar mela in the Madhipura subdivision of the Bhagalpur district. The Assistant Directors visited these and helped the local authorities in the arrangements made for them ; epidemic doctors are detailed when necessary, or when asked for.

39. Jharial Mines Board of Health.—

The sanitary control of the Jharial and adjoining coal-mining areas vests in the Jharial Mines Board of Health which now control the whole area of the Dhanbad subdivision (except Dhanbad municipality), the population of which is 504,736.

A tabulated statement (Appendix III) is attached which shows the incidence of epidemic disease during the year. Cholera, small-pox and influenza accounted for a total of 74 deaths amongst the colliery population of about 126,000.

Of the 1,205 deaths, 30 occurred in 100 cases of cholera which shows a mortality of 30 per cent and the death ratio of 0.4 per 1,000 as compared with the provincial ratio 1.1. In the whole area there were 249 deaths from cholera and 25 from small-pox in a total population of 504,736 which gives mortality ratios of 0.4 for cholera and 0.1 for small-pox.

A Retrenchment Committee met during the year and recommended certain reductions in the sanitary staff employed by the Board. Altogether four sanitary inspectors, seven health overseers, five jamadars and twenty-six sweepers were discharged during the year. This reduction was principally affected in the rural areas controlled by the Mines Board of Health. No reduction was made in the congested mining areas. The Retrenchment Committee also recommended the abolition of the post of Assistant Health Officer which recommendation Government reluctantly consented to. It is obvious that the same amount of efficiency cannot be expected from this greatly reduced staff, but the Chief Medical Officer has been assured by the Board that extra staff will be sanctioned should the emergency arise for such an increase.

During the year under report the Board opened four Maternity and Child Welfare Centres at the following centres with the aid of the Colliery authorities concerned :—

- (a) Kustara,
- (b) Kusoonda-Nayadee,
- (c) Central Kerkend,
- (d) Kendwadih,

and a certain amount of work has been done in independent collieries in the neighbourhood.

A Maternity Supervisor was appointed who controls the work at the four centres. The results of the first year's work have been encouraging—the number of ante-natal cases attending for advice exceeded all expectation, and the number of maternity cases attended came as a surprise to all concerned.

The mining settlements were visited by the Director of Public Health and the Assistant Director of Public Health during the year, and close touch has always been maintained by the Public Health Department with the sanitary administration of the coalfield.

The Jharia Mines Board of Health and their Chief Medical Officer and staff are to be congratulated on the satisfactory results of the year's work and on the steady progress achieved.

40. Public Health Laboratory.—

During the year 1,201 items were examined as compared with 1,527 in the previous year. The reduction in the number of items dealt with is due to fewer samples of food-stuffs being sent for analysis.

I.—CHEMICAL EXAMINATION.

						Items.
Water	...	...	...	...	...	260
Ghee	...	...	...	...	...	270
Mustard oil	...	...	...	...	...	59
Atta and flour	...	...	...	...	...	12
Milk	...	...	...	...	...	15
Miscellaneous	...	...	...	...	...	50
Total						666

II.—BACTERIOLOGICAL EXAMINATION.

Water	...	...	...	...	...	520
Miscellaneous	...	...	...	...	...	15
Total						535
Grand total						1,201

The number of food samples examined shows a very high percentage of adulteration. For example 41·85 per cent of the ghee samples, 37·28 per cent of mustard oil samples and 33·33 per cent of milk samples were found to be adulterated.

Full use is not made by local bodies of this opportunity of checking the adulteration of food-stuffs, and the Assistant Directors find it necessary to draw the attention of the Executive Officers of municipalities to the importance and necessity of sending samples to the laboratory for analysis, and the subsequent prosecution of vendors found to be selling adulterated articles of food.

Dr. K. N. Bagchi, the Chemical Analyst for the province, was on study leave in England throughout the year. Babu J. C. Das, B.Sc., the Assistant Analyst, officiated as Chemical Analyst for the whole period and Babu R. L. Dey acted as assistant to him.

The provincial bacteriophage investigation was continued during the year under the supervision and control of Dr. I. N. Asheshov whose bacteriophage enquiry is being conducted in the Public Health Laboratories at Patna.

41. Personnel.—

The work of Dr. A. N. Chatterji, officiating Assistant Director of Public Health, North Bihar Circle, was particularly satisfactory. The experiment with bacteriophage in the two districts of Muzaffarpur and Purnea was carried out under his supervision and control, and the accuracy of the statistics collected for the report on the experiment was largely due to his efforts.

Dr. J. L. Das, Assistant Director of Public Health, Orissa Circle, was largely responsible for the successful arrangements made at Puri for the great Car Festival.

Dr. B. P. Mozoomdar, Assistant Director of Public Health, Chota Nagpur Circle, held charge of the Vaccine Depot at Namkum and was responsible for the prompt despatch of all vaccines to Civil Surgeons and Chairmen of local bodies.

The work of Dr. B. Naik, Health Officer of Puri, was again most satisfactory particularly during the Car Festival. His valuable services are again brought to the special notice of Government.

J. A. S. PHILLIPS, LT.-COL., I.M.S.,

Director of Public Health.

Annual Vaccination Report of the Province of Bihar and Orissa for the year 1931-32.

1. Following the example of the Governments of Bombay and the United Provinces, it has been decided by the Government of Bihar and Orissa to include the Annual Vaccination Report with the Annual Public Health Report in future.

The statistics in the two reports are for different periods, those in the Annual Public Health Report being for the calendar year, whereas those in the Vaccination Report are for the financial year, in order that the figures for the complete vaccination season of October to March may be included in it.

2. *Staff.*—Major S. L. Mitra, I.M.S., held charge of the department up to 8th October 1931 and Lt.-Col. J. A. S. Phillips, I.M.S., from the 9th October to the end of the year.

The undermentioned officers held charge of the four circles for periods as noted against their names:—

(1) *South Bihar Circle.*—Dr. R. M. Prasad from 1st April 1931 to 31st March 1932.

(2) *North Bihar Circle.*—Dr. A. N. Chatterji from 1st April 1931 to 31st March 1932.

(3) *Chota Nagpur Circle.*—Dr. B. P. Mozoomdar was in charge of the circle from 1st April 1931 to 10th March 1932, Dr. R. M. Prasad from 11th March to 31st March 1932.

Doctor B. P. Mozoomdar held charge of the Vaccine Depot at Namkum throughout the year except for the period from 11th March to 31st March 1932.

(4) *Orissa Circle.*—Dr. J. L. Das was in charge of this circle from 1st April 1931 to 2nd November 1931, Dr. B. P. Mozoomdar from 3rd November to 23rd December 1931, Dr. J. L. Das from 24th December 1931 to 31st March 1932.

The inspecting staff consisted of 21 district inspectors of vaccination and 68 sub-inspectors of vaccination (including three deputed for duty at the Vaccine Depot). The total number of vaccinators employed in the province during the year was 1,095 licensed and 269 paid, against 1,103 licensed and 246 paid in the previous year.

In municipalities and in districts of Puri and Hazaribagh, vaccination was done by paid vaccinators; but otherwise the work throughout the province was carried out under the licensed system, except for the employment of paid vaccinators by district boards, and employed temporarily by Civil Surgeons for short periods to deal with outbreaks of small-pox.

3. *Operations performed.*—The total number of operations performed during the year amounted to 1,206,628 as compared with 1,171,152 last year.

This shows an increase of 35,476 in the number of operations as compared with the figure for 1930-31.

Vaccination is not yet a popular measure with the masses in the province. When small-pox is prevalent, the people show some degree of willingness to have their children protected, and in 1926 and 1927 when the disease raged in epidemic form, a greater number of vaccinations was recorded. In 1929 there were fewer cases of small-pox in comparison with 1928, so that there was not therefore the same incentive. In 1931, however, there has been an increase of 35,476 over the figure for 1930. This was probably due to the slight increase in the number of cases of small-pox that occurred in 1931.

Of the total number of operations performed 1,178,859 were done by the staff of Vaccination Department as compared with 1,140,692 done last year. 1,058,096 operations were primary and 120,763 were revaccinations against 1,002,173 primary operations and 138,519 revaccinations done last year.

There was an increase of 55,923 in the number of primary operations and a decrease of 17,756 in the number of revaccinations during the year. Of the total operations performed (1,178,859), 1,107,295 equal to 93·93 per cent were successful as compared with 1,078,433 equal to 94·36 last year.

The number of operations performed in municipalities decreased by 844 as compared with last year's returns. The total number of operations performed was 52,440 and the number of successful operations was 40,636 of which 34,420 were primary and 6,216 were revaccinations, as compared with 33,336 and 7,500 respectively last year. The ratios of success in municipalities were 97·78 per cent for primary operations and 36·06 per cent for revaccinations as compared with 97·71 per cent and 39·13 per cent, respectively, last year.

The number of operations performed in rural areas was 1,126,419 as compared with 1,087,408 last year and the ratios of successes were 99·51 per cent for primary operations and 47·13 for revaccinations.

4. Vaccination in districts.—The districts of Patna and Shahabad reported increases of 8,871 and 7,504 respectively in the number of operations performed, Gaya reported decrease of 4,832. Vaccination in the rural areas of the district of Patna is now controlled by the health officer of the district board.

Patna Division.

The districts of Muzaffarpur, Champaran, Darbhanga and Saran recorded increases of 2,041, 5,597, 2,570 and 1,422 respectively.

Tirhut Division.

The districts of Bhagalpur, Monghyr and Purnea recorded increases of 8,763, 5,528 and 1,083, respectively. The Santal Parganas recorded a decrease of 4,789.

Bhagalpur Division.

The districts of Balasore and Angul recorded decreases of 1,199 and 324 respectively. The districts of Cuttack, Puri and Sambalpur recorded increases of 21,630, 2,689 and 3,497, respectively.

Orissa Division.

The districts of Hazaribagh and Palamau recorded increases of 4,232 and 1,646, respectively, whereas Ranchi, Manbhum and Singhbhum recorded decreases of 21,398, 2,996 and 6,059, respectively.

Chota Nagpur Division.

5. Vaccination in towns and compulsory areas.—Statement VI shows that during the year, 14,926 children under one year of age, out of an available number of 24,014, or 62·15 per cent were successfully vaccinated.

The towns of Muzaffarpur, Hajipur, Darbhanga, Lalganj, Samastipur, Jamalpur and Dhanbad show the smallest proportion of work done.

6. Work done in the Native States under the supervision of the Political Agent and Commissioner.—Vaccination work in the Orissa States has steadily developed during the recent years under the direction and encouragement of the Political Agent and Commissioner.

Both vaccination and, to a large extent, revaccination are practically compulsory in the majority of these States.

During the year under report 208,006 primary operations and 305,619 revaccinations were performed as compared with 196,555 and 301,181, respectively in the previous year. The progress made in vaccination in these States has been steady and it is hoped that this will be maintained.

7. Protection of infants.—During the year under report, the number of children under one year available for vaccination was 1,062,331 and the number of successful operations was 366,706 equal to 345 per thousand against 339,415 or 315 per thousand successful operations out of 1,076,911 children

available during the previous year. The protection of infants in municipalities is separately shown in statement VI. It gives a ratio of 622 per thousand of the surviving infant population as compared with 640 in the previous year.

These figures are unsatisfactory, inasmuch as they show that far more than half of the total number of operations is performed on children over one year of age. Civil Surgeons and Assistant Directors of Public Health are unanimous in attributing the opposition to vaccination to be concerned more with the age of the child than with the operation itself, as there is a strong prejudice against vaccination of infants at an early age. The advantages in retaining the limit of age for compulsory primary vaccination as it now stands are obvious, but prejudices in India die hard and it will take years of education to dispel this one.

8. Incidents and mortality of small-pox.—During the last ten years the total number of deaths from small-pox in the districts of this province has been 134,249.

During the first quinquennium, the number of deaths was 73,307 and during the second, 60,942. In each of last five years the mortality was as follows :—

26,843, 10,775, 6,648, 8,137 and 8,539.

The provincial ratios of the mortality from small-pox over thousand of population during the last five years have been 0.79, 0.31, 0.19, 0.24 and 0.23.

In the Annual Vaccination Report for 1926-27, it was stated that small-pox which had been raging in epidemic form was showing signs of subsiding. There was a considerable decrease in the incidence of the disease in 1927-28; in 1928-29 there was a further reduction, and in 1929-30 there has been a still further reduction in the number of cases, in 1930-31 there has been a small increase over the figure of 1929-30 and in 1931-32 there has been a slight increase over the figure of 1930-31.

9. Prevention of small-pox.—The statistics given in previous paragraphs showing the number of operations performed during the year are not satisfactory, and indicate the insufficiency and inefficiency of the existing arrangements for vaccination in the province. The agency exists but its efforts are defeated for the most part by the attitude of the people towards this simple and efficient method of protection.

Small-pox is a preventable disease, and vaccination can prevent it, and in the light of this knowledge, and in the face of the unsatisfactory vaccination state of the people there is a great necessity for a more vigorous and complete vaccination policy.

During the year, the question of compulsory vaccination and the best method of carrying it out received careful consideration.

In the Patna district, where the responsibility for vaccination in rural areas now vests with the district board, vaccination when performed at a depot is free, but a fee of four annas is charged for every operation done in private dwellings or in villages. Vaccinators are paid one anna per operation done in the depot, and receive a percentage of the fees collected for operations done outside the depot. This scheme is, more or less, self-supporting and it will probably be adopted by other districts with slight modifications to suit the particular district.

During the year a modification of this scheme was suggested by the Muzaffarpur district board. Here, as at Patna, vaccinations are performed free at depots, but a fee of annas four is levied by the licensed vaccinators for every operation done outside these depots. The whole of this fee is taken by the vaccinator and no complicated accounting is necessary as with the Patna scheme.

10. Inspection of work.—During the year under report the Assistant Directors of Public Health inspected 76,373 primary vaccinations as against 67,439 in the previous year.

The inspecting work done by the Assistant Directors of Public Health has been comprehensive and they have submitted valuable reports on the efficiency of the staff and work in the 20 districts in the province.

The Superintendents of vaccination of the province inspected 36,228 primary and 5,942 revaccination operations against 30,616 primary and 6,192 revaccinations last year.

11. Supply of vaccine.—The Vaccine Depot at Namkum supplied the province with vaccine throughout the year. A large supply of vaccine is held in reserve and an ample stock of the necessary stores and supplies for manufacture is maintained; 1,810,625 doses of vaccine were manufactured during the year as compared with 1,658,616 doses last year. The number of doses issued was 2,827,559 against 2,833,143 in 1930-31. The number of doses in stock at the end of the year was 3,076,009. The number of cattle used during the year was 497 as compared with 403 in the previous year, and the average yield of crude vaccine was over 36 grammes per animal. The working cost of the depot for the year amounted to Rs. 26,209 as compared with Rs. 27,065 in the previous year. The average cost of the vaccine per dose works out at 2·78 pies on the gross expenditure, and the sale proceeds of vaccine lymph was Rs. 29,633.

12. Vaccine depot and cold storage.—During the year under report, no serious epidemic diseases broke out amongst the calves. A few calves had a mild attack of foot and mouth disease but this was readily controlled.

The total mortality amongst calves was 0·8 per cent.

The cold storage worked satisfactorily although some repairs were required to be done. The engines and other machinery were cleaned and petty repairs carried out. The construction of a small workshop for which administrative approval was obtained had to be postponed for financial reasons.

Throughout the year, cholera and influenza vaccines were stocked in the depot and issued throughout the province as required.

13. Experimental work.—All seed vaccine was manufactured at the depot and worked satisfactorily. 3747·5 grammes of seed vaccine were prepared.

The rejuvenation of the seed vaccine was maintained by passage through children, rabbits, buffalo-calves and cow-calves.

14. Cost of the Department.—The total cost of the Vaccination Department (excluding the Vaccine Depot) during the year, as detailed in statement II, was Rs. 160,622 or Rs. 11,257 less than the previous year.

The cost per successful operation was two annas and three pies against two annas and six pies in the previous year.

15. Personnel.—In conclusion, I desire to bring to the notice of Government the good work done by the Assistant Directors of Public Health in connection with the inspection of vaccination in their respective circles, i.e., Dr. B. P. Mozoomdar in the Chota Nagpur Circle, Dr. J. L. Das in the Orissa Circle, Dr. A. N. Chatterji in the North Bihar Circle, and Dr. R. M. Prasad in the South Bihar Circle.

Dr. B. P. Mozoomdar was in supervising and controlling charge of the Vaccine Depot in addition to his own duties and showed great keenness and interest in all matters connected with the depot.

Dr. C. N. Banerji, the Superintendent of the depot, performed his duties in a satisfactory manner.

J. A. S. PHILLIPS, Lt.-Col., I.M.S.,
Director of Public Health.

APPENDIX I.

1	2			3			4		
No.	Districts.			Population according to the Census of 1931.			Number of Births registered.		
				Male.	Female.	Total.	Male.	Female.	Total.
PATNA DIVISION.									
1	Patna	...	...	956,124	890,350	1,846,474	32,143	30,485	62,628
2	Gaya	...	...	1,193,643	1,194,819	2,388,462	51,383	48,940	100,323
3	Shahabad	...	...	999,099	994,390	1,993,489	37,136	35,294	72,430
	Total	...	...	3,148,866	3,079,559	6,228,425	120,662	114,719	235,381
TIRHUT DIVISION.									
4	Saran	...	...	1,220,049	1,266,419	2,486,468	44,656	44,160	88,816
5	Champaran	...	...	1,080,956	1,064,731	2,145,687	33,995	32,621	66,616
6	Muzaffarpur	...	...	1,443,847	1,497,178	2,941,025	48,458	47,155	95,613
7	Darbhanga	...	...	1,570,959	1,595,135	3,166,094	51,505	49,672	101,177
	Total	...	...	5,315,811	5,423,463	10,739,274	178,614	173,608	352,222
BHAGALPUR DIVISION.									
8	Monghyr	...	...	1,145,797	1,141,357	2,287,154	42,038	41,400	83,438
9	Bhagalpur	...	...	1,130,584	1,104,048	2,234,632	33,312	31,904	65,216
10	Purnea	...	...	1,129,681	1,056,862	2,186,543	31,350	29,520	60,870
11	Santal Parganas	...	...	1,025,921	1,025,551	2,051,472	30,006	29,637	59,643
	Total	...	...	4,431,983	4,327,818	8,759,801	136,706	132,461	269,167
ORISSA DIVISION.									
12	Cuttack	...	...	1,028,134	1,148,573	2,176,707	39,812	37,312	77,124
13	Balasore	...	...	480,518	510,082	990,600	17,348	16,497	33,845
14	Angul	...	...	108,925	113,811	222,736	5,627	5,328	10,955
15	Puri	...	...	500,214	534,940	1,035,154	19,840	18,815	38,655
16	Sambalpur	...	...	431,460	449,485	880,945	18,607	17,924	36,531
	Total	...	...	2,549,251	2,756,891	5,306,142	101,234	95,876	197,110
CHOTA NAGPUR DIVISION.									
17	Hazaribagh	...	...	751,956	765,401	1,517,357	28,964	28,201	57,165
18	Ranchi	...	...	777,063	790,086	1,567,149	28,018	27,163	55,181
19	Palamau	...	...	409,778	408,958	818,736	18,538	18,001	36,539
20	Manbhum	...	...	940,009	870,881	1,810,890	25,140	23,759	48,899
21	Singhbhum	...	...	469,421	460,381	929,802	12,327	12,019	24,346
	Total	...	...	3,348,227	3,295,707	6,643,934	112,987	109,143	222,130
	Total for the Province	...	...	18,794,138	18,883,438	37,677,576	650,203	625,807	1,276,010

DIX I.
districts of Bihar and Orissa Province, during the year 1931.

5			6	7	8	9			10
Ratio of births per 1,000 of population.			Number of males born to every 100 females born.	Excess of births over deaths per 1,000 of population.	Excess of deaths over births per 1,000 of population.	Mean ratio of births per 1,000 during previous five years.			No.
Male.	Female.	Total.				Male.	Female.	Total.	
17.4	16.5	33.9	105	4.2	...	20.1	19.3	39.4	1
21.5	20.5	42.0	105	8.5	...	22.7	22.4	45.1	2
18.6	17.7	36.3	105	7.4	...	20.6	19.3	39.9	3
19.4	18.4	37.8	105	6.9	...	21.3	20.5	41.8	
18.0	17.7	35.7	101	6.3	...	19.1	18.3	37.4	4
15.8	15.2	31.0	104	6.5	...	18.8	18.2	37.0	5
16.5	16.0	32.5	102	3.8	...	18.8	18.1	36.9	6
16.3	15.7	32.0	103	5.5	...	17.8	17.3	35.1	7
16.6	16.2	32.8	103	5.4	...	18.6	17.9	36.5	
18.4	18.1	36.5	101	7.0	...	21.2	20.5	41.7	8
14.9	14.3	29.2	104	6.2	...	17.9	16.9	34.8	9
15.3	13.5	27.8	106	8.6	...	14.9	14.1	29.0	10
14.6	14.4	29.0	101	9.5	...	15.6	15.3	30.9	11
15.6	15.1	30.7	103	7.8	...	17.4	16.8	34.2	
18.3	17.1	35.4	107	0.4	...	18.5	17.3	35.8	12
17.8	16.9	34.8	105	...	0.4	16.5	15.3	31.8	13
25.2	23.9	49.1	106	19.7	...	24.4	23.7	48.1	14
19.1	18.2	37.3	106	6.0	...	19.3	18.4	37.7	15
21.1	20.3	41.5	103	9.5	...	20.0	19.0	39.0	16
19.1	18.0	37.1	105	3.5	..	18.7	17.6	36.3	
19.1	18.6	37.7	102	15.8	...	22.2	21.7	43.9	17
17.9	17.3	35.2	103	13.2	...	19.8	19.1	38.9	18
22.6	22.0	44.6	103	13.5	...	22.8	22.6	45.4	19
13.9	13.1	27.0	105	10.4	...	16.2	15.4	31.6	20
13.3	12.9	26.2	102	11.6	...	14.9	14.5	29.4	21
17.0	16.4	33.4	103	12.8	...	19.1	18.5	37.6	
17.3	16.6	33.9	104	7.3	...	18.9	18.1	37.0	

Annual Form No. 11.—Statement of Births and Deaths registered

1	2			3	4	5			6		7		
No.	District.			Area in square miles.	Average population per square mile.	Population (Census, 1931).			Births.		Number of deaths registered.		
						Male.	Female.	Total.	Total number.	Birth-rate per 1,000 of population.	Male.	Female.	Total.
PATNA DIVISION.													
1	Patna	...	...	2,063	893	956,124	890,350	1,846,474	62,628	33·9	27,886	27,055	54,941
2	Gaya	...	...	4,714	506	11,93,643	1,194,819	2,388,462	100,323	42·0	41,503	38,543	80,046
3	Shahabad	...	...	4,372	456	999,099	994,390	1,993,489	72,430	36·3	29,097	28,464	57,561
	Total			11,154	558	3,148,866	3,079,559	6,228,425	235,381	37·8	98,486	94,062	192,548
TIRHUT DIVISION.													
4	Saran	...	...	2,683	927	1,220,049	1,266,419	2,486,468	88,816	35·7	38,809	34,315	73,124
5	Champaran	...	...	3,531	607	1,080,956	1,064,731	2,145,687	66,616	31·0	28,447	24,063	52,510
6	Muzaffarpur	...	...	3,036	968	1,443,847	1,497,178	2,941,025	95,613	32·5	44,492	40,038	84,530
7	Darbhanga	...	...	3,348	945	1,570,959	1,595,135	3,166,094	101,177	32·0	45,186	38,729	83,915
	Total			12,598	852	5,315,811	5,423,463	10,739,274	352,222	32·8	156,934	137,145	294,079
BHAGALPUR DIVISION.													
8	Monghyr	...	...	3,927	582	1,145,797	1,141,357	2,287,154	83,438	36·5	34,733	32,742	67,475
9	Bhagalpur	...	...	4,226	528	1,130,584	1,104,048	2,234,632	65,216	29·2	27,352	24,087	51,439
10	Purnea	...	...	4,972	439	1,129,681	1,056,862	2,186,543	60,870	27·8	22,666	19,304	41,970
11	Santal Parganas	...	...	5,458	375	1,025,921	1,025,551	2,051,472	59,643	29·0	21,181	18,820	40,001
	Total			18,583	471	4,431,983	4,327,818	8,759,801	269,167	30·7	105,932	94,953	200,885
ORISSA DIVISION.													
12	Cuttack	...	...	3,654	595	1,028,134	1,148,573	2,176,707	77,124	35·4	37,244	39,052	76,296
13	Balasore	...	...	2,055	482	480,518	510,082	990,600	33,845	34·8	16,666	18,207	34,873
14	Angul	...	...	1,681	132	108,925	113,811	222,736	10,955	49·1	3,308	3,246	6,554
15	Puri	...	...	2,492	415	500,214	534,940	1,035,194	38,655	37·3	16,082	16,321	32,403
16	Sambalpur	...	...	3,324	230	431,460	449,485	880,945	36,531	41·5	14,457	13,703	28,160
	Total			13,706	387	2,549,251	2,756,891	5,306,142	197,110	37·1	87,757	90,529	178,286
CHOTA NAGPUR DIVISION.													
17	Hazaribagh	...	...	7,021	216	751,956	765,401	1,517,357	57,165	37·7	17,314	15,937	33,251
18	Ranchi	...	...	7,102	220	777,063	790,086	1,567,149	55,181	35·2	18,113	16,421	34,534
19	Palamau	...	...	4,916	166	409,778	408,958	818,736	36,539	44·6	13,279	12,222	25,501
20	Manbhum	...	...	4,095	442	940,009	870,881	1,810,890	48,899	27·0	16,395	13,657	30,052
21	Singbhum	...	...	3,879	239	469,421	460,381	929,802	24,346	26·2	7,179	6,384	13,563
	Total			27,013	235	3,348,227	3,295,707	6,643,934	222,130	33·4	72,280	64,621	136,901
	Total for the Province			83,054	453	18,794,138	18,883,438	37,677,576	1,276,010	33·9	521,389	481,310	1,002,699

DIX I—contd.

in the districts of Bihar and Orissa Province, during the year 1931.

8	9											10			11
Number of deaths of males to every 100 deaths of females.	Death-rate per 1,000 of population from—											Mean ratio of deaths per 1,000 during previous five years.			No.
	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	All causes.			Male.	Female.	Total.	
									Male	Female.	Total.				
103	2·7	0·2	0·01	17·4	0·9	0·7	0·4	7·4	29·2	30·4	29·7	27·1	27·7	27·4	1
108	3·0	0·3	0·03	23·9	0·1	0·05	0·2	5·9	34·8	32·2	33·5	31·3	29·1	30·2	2
102	1·9	0·4	0·0005	21·1	0·03	0·01	0·2	5·2	29·1	28·6	28·9	29·4	27·0	28·2	3
105	2·6	0·3	0·02	21·0	0·3	0·2	0·2	6·1	31·3	30·5	30·9	29·5	28·0	28·8	
113	0·8	0·2	0·5	17·1	0·5	0·3	0·5	9·5	31·8	27·1	29·4	27·5	22·0	24·7	4
118	0·3	0·08	...	20·4	0·01	0·003	0·3	3·3	26·3	22·6	24·5	27·4	23·7	25·5	5
111	0·09	0·05	0·6	24·9	0·05	0·01	0·4	2·6	30·8	26·7	28·7	31·8	27·9	29·8	6
117	0·3	0·1	0·4	23·1	0·06	0·01	0·3	2·2	28·8	24·3	26·5	29·5	25·7	27·6	7
115	0·4	0·1	0·4	21·7	0·1	0·08	0·4	4·2	29·5	25·2	27·4	29·3	25·0	27·1	
106	1·8	0·2	0·5	22·1	0·1	0·03	0·3	4·5	30·3	28·7	29·5	29·8	27·4	28·6	8
101	1·8	0·06	...	19·1	0·04	0·02	0·2	1·8	24·2	21·8	23·0	26·4	23·6	25·0	9
113	0·2	0·05	...	17·9	0·02	0·01	0·2	0·8	20·6	18·2	19·2	25·3	24·1	24·7	10
112	0·6	0·3	...	16·2	0·1	0·1	0·3	1·8	20·6	18·3	19·5	21·6	18·9	20·2	11
111	1·1	0·1	0·1	18·9	0·07	0·05	0·2	2·3	23·9	21·9	22·9	25·9	23·7	24·8	
95	2·4	0·5	...	15·9	5·2	0·6	0·5	9·8	36·2	34·0	35·0	34·4	29·0	31·5	12
91	2·0	0·2	...	19·5	0·6	0·08	0·4	12·3	34·7	35·7	35·2	32·7	30·4	31·5	13
102	0·01	...	...	24·4	0·2	0·06	0·6	3·9	30·3	28·5	29·4	31·1	28·2	29·6	14
98	1·1	0·1	...	11·5	4·5	1·3	0·3	12·5	32·1	30·3	31·3	32·5	29·0	30·7	15
105	0·4	1·3	...	14·8	2·8	1·3	0·2	11·0	33·5	30·5	32·0	28·4	25·7	27·0	16
97	1·6	0·5	...	15·9	3·6	0·7	0·4	10·7	34·4	32·8	33·6	32·6	28·7	30·6	
108	1·0	0·1	...	17·3	0·05	0·02	0·2	2·9	23·0	20·8	21·9	27·6	24·1	25·8	17
110	0·03	0·04	...	18·8	0·3	0·04	0·2	2·5	23·3	20·8	22·0	24·3	20·6	22·4	18
108	0·6	0·2	...	25·5	0·02	0·004	0·3	4·5	32·4	29·9	31·1	32·4	29·6	31·0	19
120	0·3	0·07	...	14·5	0·04	0·04	0·2	1·5	17·5	15·7	16·6	18·4	16·5	17·5	20
112	0·04	0·2	...	12·6	0·03	0·02	0·2	1·5	15·3	13·8	14·6	17·8	14·8	16·2	21
112	0·4	0·1	...	17·3	0·1	0·03	0·2	2·4	21·6	19·6	20·6	23·5	20·7	22·1	
108	1·1	0·2	0·1	19·4	0·6	0·2	0·3	4·7	27·7	25·5	26·6	28·0	25·7	26·5	

Annual Form No. III.--Deaths registered in the districts of Bihar

1	2	3					
No.	District.	Population according to census, 1931.	January.	February.	March.	April.	May.
PATNA DIVISION.							
1	Patna District	{ Urban ... 258,284	193	181	166	166	207
		{ Rural ... 1,588,190	1,706	1,499	2,564	2,418	3,148
		{ Total ... 1,846,474	1,899	1,680	2,730	2,584	3,355
2	Gaya District ...	{ Urban ... 105,185	143	138	184	224	265
		{ Rural ... 2,283,277	3,376	2,478	3,225	4,343	6,198
		{ Total ... 2,388,462	3,519	2,616	3,409	4,567	6,463
3	Shahabad District	{ Urban ... 117,630	47	55	38	90	72
		{ Rural ... 1,875,859	2,655	1,976	2,677	2,802	3,511
		{ Total ... 1,993,489	2,702	2,031	2,715	2,892	3,583
TIRHUT DIVISION.							
4	Saran District...	{ Urban ... 70,475	73	81	90	94	98
		{ Rural ... 2,415,993	4,181	3,535	4,431	5,009	5,077
		{ Total ... 2,486,468	4,254	3,616	4,521	5,103	5,175
5	Champanan District	{ Urban ... 45,485	23	18	21	22	35
		{ Rural ... 2,100,261	3,612	2,645	3,490	3,091	4,414
		{ Total ... 2,145,687	3,635	2,663	3,511	3,113	4,449
6	Muzaffarpur District	{ Urban ... 82,241	87	94	92	139	114
		{ Rural ... 2,858,784	5,379	4,006	5,975	6,440	6,986
		{ Total ... 2,941,025	5,466	4,100	6,067	6,579	7,100
7	Darbhanga District	{ Urban ... 98,225	153	133	182	205	179
		{ Rural ... 3,067,869	4,997	4,398	6,263	6,217	6,949
		{ Total ... 3,166,094	5,150	4,531	6,445	6,422	7,128
BHAGALPUR DIVISION.							
8	Monghyr District	{ Urban ... 83,209	79	83	89	110	103
		{ Rural ... 2,203,945	3,195	2,772	3,971	4,270	4,592
		{ Total ... 2,287,154	3,274	2,855	4,060	4,380	4,698
9	Bhagalpur District	{ Urban ... 83,080	56	64	63	124	56
		{ Rural ... 2,145,552	3,606	2,350	3,255	2,784	3,634
		{ Total ... 2,234,632	3,662	2,414	3,318	2,908	3,690
10	Purnea District	{ Urban ... 46,223	41	32	35	42	27
		{ Rural ... 2,140,320	3,589	2,497	3,692	3,608	2,909
		{ Total ... 2,186,543	3,630	2,529	3,727	3,650	2,936
11	Sa tal Parganas District ..	{ Urban ... 48,536	9	12	19	13	14
		{ Rural ... 2,002,936	2,763	2,310	2,782	2,781	2,977
		{ Total ... 2,051,472	2,772	2,322	2,801	2,794	2,991
ORISSA DIVISION.							
12	Cuttack District	{ Urban ... 88,556	116	88	107	97	88
		{ Rural ... 2,088,151	6,028	5,285	6,337	5,393	4,943
		{ Total ... 2,176,707	6,144	5,373	6,444	5,495	5,031
13	Balasore District	{ Urban ... 17,843	16	39	33	25	12
		{ Rural ... 972,757	2,686	2,353	2,930	2,155	2,036
		{ Total ... 990,600	2,702	2,392	2,963	2,180	2,098

DIX I—contd.

and Orissa Province, during each month of the year 1931.

4							5	
June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.	No.
414	353	660	460	267	285	328	3,680	1
5,608	4,552	11,539	7,265	4,601	3,482	2,879	51,261	
6,022	4,905	12,199	7,725	4,868	3,767	3,207	54,941	
275	318	466	322	231	259	204	3,029	2
7,593	7,434	11,556	12,505	7,946	5,862	4,501	77,017	
7,868	7,752	12,022	12,827	8,177	6,121	4,705	80,046	
102	100	126	101	99	81	76	987	3
5,875	6,421	7,776	8,244	5,905	4,981	3,751	56,574	
5,977	6,521	7,902	8,345	6,004	5,062	3,827	57,561	
182	143	240	178	133	106	90	1,503	4
6,844	7,367	9,164	9,179	6,727	5,001	5,101	71,616	
7,026	7,510	9,404	9,357	6,860	5,107	5,191	73,124	
23	25	41	38	42	16	22	323	5
4,482	3,771	5,446	6,320	4,927	4,696	4,696	52,184	
4,505	3,793	5,487	6,358	5,332	4,943	4,718	52,510	
139	164	203	181	159	128	128	1,623	6
7,323	6,299	8,453	8,616	8,496	7,482	7,447	83,902	
7,462	6,463	8,656	8,797	8,655	7,610	7,575	84,530	
159	131	205	160	128	169	127	1,921	7
7,406	6,073	8,231	8,362	8,728	7,586	6,774	81,984	
7,565	6,204	8,436	8,522	8,856	7,755	6,901	83,915	
134	120	269	233	157	119	101	1,605	8
5,584	4,801	8,831	9,225	7,483	6,491	4,655	65,870	
5,718	4,921	9,100	9,463	7,640	6,610	4,756	67,475	
80	84	107	112	97	87	102	1,032	9
3,945	3,461	5,542	6,135	5,436	5,560	4,699	50,407	
4,025	3,545	5,649	6,247	5,523	5,647	4,801	51,439	
24	31	36	31	30	52	54	435	10
3,276	2,612	3,205	3,929	3,598	3,949	4,671	41,535	
3,300	2,643	3,241	3,960	3,623	4,001	4,725	41,970	
13	10	19	17	14	6	11	157	11
3,304	2,903	4,991	5,114	3,455	3,346	3,118	39,844	
3,317	2,913	5,010	5,131	3,469	3,352	3,129	40,001	
107	138	269	141	101	93	115	1,460	12
6,963	5,996	8,595	7,901	5,147	5,893	6,345	74,836	
7,075	6,134	8,864	8,042	5,248	5,986	6,460	76,296	
24	23	26	17	29	31	29	304	13
2,638	2,760	3,905	3,583	2,483	3,179	3,761	34,569	
2,712	2,783	3,931	3,600	2,512	3,210	3,790	34,873	

Annual Form No. III.—Deaths registered in the districts of Bihar

1	2						
No.	District.	Population according to census, 1931.	January.	February.	March.	April.	May.
	ORISSA DIVISION—concl'd.						
14	Angul district ...	{ Rural ... 222,736	439	397	457	559	605
		{ Total ... 222,736	439	397	457	559	605
		{ Urban ... 37,563	79	73	73	75	92
15	Puri district ...	{ Rural ... 997,586	2,107	2,114	2,493	2,347	2,463
		{ Total ... 1,035,154	2,186	2,187	2,566	2,422	2,555
		{ Urban ... 15,017	38	31	31	36	30
16	Sambalpur District ...	{ Rural ... 865,928	1,555	1,439	1,932	2,019	2,214
		{ Total ... 880,945	1,593	1,470	1,963	2,055	2,244
	CHOTA NAGPUR DIVISION.						
		{ Urban ... 50,857	31	22	28	37	42
17	Hazaribagh District ...	{ Rural ... 1,466,500	2,445	1,728	1,992	2,172	2,907
		{ Total ... 1,517,357	2,476	1,750	2,020	2,209	2,949
		{ Urban ... 58,094	20	15	23	14	16
18	Ranchi District ...	{ Rural ... 1,509,055	2,081	1,776	2,345	2,272	2,467
		{ Total ... 1,567,149	2,101	1,791	2,368	2,286	2,483
		{ Urban ... 12,040	5	2	4	6	10
19	Palamau District ...	{ Rural ... 806,696	1,725	1,356	1,433	1,783	1,961
		{ Total ... 818,736	1,730	1,358	1,437	1,789	1,971
		{ Urban ... 56,893	38	47	33	47	44
20	Manbhum District ...	{ Rural ... 1,754,497	1,868	1,885	2,397	2,610	2,755
		{ Total ... 1,810,890	1,906	1,932	2,430	2,657	2,799
		{ Urban ... 30,697	27	19	21	34	23
21	Singhbhum District ...	{ Rural ... 899,105	902	1,002	1,172	1,089	1,012
		{ Total ... 929,802	929	1,021	1,193	1,123	1,035
		{ Urban ... (a)1,411,639	1,274	1,227	1,332	1,600	1,530
	Total for the province ...	{ Rural ... 36,265,937	60,895	49,801	65,813	66,167	73,809
		{ Total ... 3,767,576	62,169	51,028	67,145	67,767	75,338
		{ Urban ...	0.9	0.9	0.9	1.1	1.1
	Ratio per 1,000 of popula-	{ Rural ...	1.7	1.4	1.8	1.8	2.0
	tion.	{ Total ...	1.6	1.3	1.8	1.8	2.0

(a) Including cantonment population.

DIX I—*contd.**and Orissa Province, during each month of the year 1931.*

3							4	5
June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.	No.
595	534	812	772	512	459	503	6,554	} 14
505	534	812	772	512	459	503	6,554	
111	181	125	82	79	99	104	1,173	} 15
3,366	2,461	3,455	3,191	1,856	2,438	2,939	31,230	
3,477	2,642	3,580	3,273	1,935	2,537	3,043	32,403	} 16
18	35	32	30	27	24	13	345	
2,445	2,413	4,048	2,751	2,422	2,361	2,216	27,815	} 16
2,463	2,448	4,080	2,781	2,449	2,385	2,229	28,160	
50	49	36	68	35	27	20	445	} 17
3,402	3,129	3,180	4,280	2,677	2,321	2,573	32,806	
3,452	3,178	3,216	4,348	2,712	2,343	2,593	33,251	} 18
30	28	37	22	28	26	18	277	
3,282	2,380	4,011	4,458	3,565	2,950	2,670	34,257	} 18
3,312	2,408	4,048	4,480	3,593	2,976	2,688	34,534	
8	11	11	4	8	8	8	85	} 19
2,525	2,443	2,544	3,138	2,305	2,244	1,959	25,416	
2,533	2,454	2,555	3,142	2,313	2,252	1,967	25,501	} 20
44	48	65	43	38	33	21	501	
2,846	2,650	3,240	2,934	2,320	1,969	2,077	29,551	} 20
2,890	2,698	3,305	2,977	2,358	2,002	2,098	30,052	
17	21	20	18	42	23	25	290	} 21
1,022	1,117	1,288	1,267	1,088	1,090	1,224	13,273	
1,039	1,138	1,308	1,285	1,130	1,113	1,249	13,563	} 21
1,954	2,013	2,933	2,263	1,744	1,672	1,596	21,193	
90,289	81,577	119,812	119,169	92,040	83,571	78,559	981,501	} 21
92,243	83,590	122,805	121,432	93,784	85,243	80,155	1,002,699	
1.4	1.4	2.1	1.6	1.2	1.2	1.1	15.1	} 21
2.5	2.2	3.3	3.3	2.5	2.3	2.2	27.0	
2.4	2.2	3.2	3.2	2.5	2.3	2.1	26.6	} 21

Annual Form No. IV.—Deaths registered according to age in the

1	2		Deaths under						
No.	District.	Not exceeding one month.							
		Male.			Female.			Total of columns 3 and 6.	
		Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.		
		1	2	3	4	5	6		7
PATNA DIVISION.									
1	Patna district	{ Urban ...	187	64	251	88	51	139	390
		{ Rural ...	1,740	969	2,709	1,431	707	2,138	4,847
		{ Total ..	1,927	1,033	2,960	1,519	758	2,277	5,237
2	Gaya district ...	{ Urban ...	64	43	107	49	32	81	188
		{ Rural ...	3,582	1,312	4,894	2,969	968	3,937	8,831
		{ Total ...	3,646	1,355	5,001	3,018	1,000	4,018	9,019
3	Shahabad district	{ Urban ...	65	5	70	53	6	59	129
		{ Rural ...	4,903	658	5,559	3,962	523	4,485	10,044
		{ Total ...	4,968	661	5,629	4,015	529	4,544	10,173
TIRHUT DIVISION.									
4	Saran district ...	{ Urban ...	46	35	81	36	36	72	153
		{ Rural ...	2,233	1,071	3,304	1,662	738	2,390	5,694
		{ Total ...	2,279	1,106	3,385	1,698	764	2,462	5,847
5	Champaran district	{ Urban ..	16	3	19	10	6	16	35
		{ Rural ...	3,065	623	3,693	2,389	398	2,787	6,480
		{ Total ...	3,081	631	3,712	2,399	404	2,803	6,515
6	Muzaffarpur district	{ Urban ..	77	32	109	58	32	90	199
		{ Rural ..	2,201	820	3,021	1,710	692	2,402	5,423
		{ Total ...	2,278	852	3,130	1,768	724	2,492	5,622
7	Darbhanga ...	{ Urban ...	68	46	114	36	44	80	194
		{ Rural ...	2,194	528	2,722	1,095	373	2,068	4,790
		{ Total ...	2,262	574	2,836	1,731	417	2,148	4,984
BHAGALPUR DIVISION.									
8	Monghyr district	{ Urban ...	59	26	85	71	25	96	181
		{ Rural ...	1,739	735	2,474	1,403	630	2,033	4,507
		{ Total ..	1,798	761	2,559	1,474	655	2,129	4,688
9	Bhagalpur district	{ Urban ...	45	13	58	12	26	38	96
		{ Rural ...	1,411	365	1,776	1,136	343	1,479	3,255
		{ Total ...	1,456	378	1,834	1,148	369	1,517	3,351
10	Barnea district...	{ Urban ...	16	8	24	15	6	21	45
		{ Rural ...	1,128	464	1,592	800	361	1,161	2,753
		{ Total ...	1,144	472	1,616	815	367	1,182	2,798
11	Santal Parganas district	{ Urban ..	5	2	7	12	1	13	20
		{ Rural ...	1,154	350	1,504	860	236	1,096	2,600
		{ Total ...	1,159	352	1,511	872	237	1,109	2,620
ORISSA DIVISION.									
12	Cuttack district	{ Urban ...	53	18	71	47	23	70	141
		{ Rural ...	2,641	1,685	4,326	2,264	1,288	3,552	7,878
		{ Total ...	2,694	1,703	4,397	2,311	1,311	3,622	8,019

DIX I—*contd.**districts of Bihar and Orissa Province, during the year 1931—contd.*

3

one year.

Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total male columns 3, 8 and 11.	Total female columns 6, 9 and 12.	Total.	No.
Male.	Female.	Total.	Male.	Female.	Total.				
8	9	10	11	12	13	14	15	16	
126	82	208	92	73	165	469	294	763	1
2,324	1,976	4,300	1,306	1,153	2,459	6,339	5,267	11,606	
2,450	2,058	4,508	1,398	1,226	2,624	6,808	5,561	12,369	
147	132	279	87	76	163	341		630	2
3,150	2,634	5,784	1,825	1,656	3,481	9,869	8,227	18,096	
3,297	2,766	6,063	1,912	1,732	3,644	10,210	8,516	18,726	
33	30	63	42	36	78	145	125	270	3
1,504	1,176	2,680	1,184	875	2,059	8,247	6,536	14,783	
1,537	1,206	2,743	1,236	911	2,137	8,392	6,661	15,053	
54	63	117	37	49	86	172	184	356	4
1,687	1,308	2,995	1,375	935	2,310	6,366	4,633	10,999	
1,741	1,371	3,112	1,412	984	2,396	6,538	4,817	11,355	
10	5	15	7	12	19	36	33	69	5
974	864	1,838	632	488	1,120	5,299	4,139	9,438	
984	869	1,853	639	500	1,139	5,335	4,172	9,507	
62	55	117	40	40	80	211	185	396	6
1,444	1,278	2,722	1,009	927	1,936	5,474	4,607	10,081	
1,506	1,333	2,839	1,049	967	2,016	5,685	4,792	10,477	
57	43	100	33	28	61	204	151	355	7
1,192	1,010	2,202	696	513	1,209	4,610	3,591	8,201	
1,249	1,053	2,302	729	541	1,270	4,814	3,742	8,556	
67	56	123	68	52	130	220	214	434	8
1,655	1,382	3,037	1,168	948	2,116	5,297	4,363	9,660	
1,722	1,438	3,160	1,236	1,010	2,246	5,517	4,577	10,094	
25	15	40	15	21	36	98	74	172	9
1,003	813	1,816	625	532	1,157	3,404	2,824	6,228	
1,028	828	1,856	640	553	1,193	3,502	2,898	6,400	
11	14	25	5	5	10	40	40	80	10
1,112	833	1,945	340	269	609	3,044	2,263	5,307	
1,123	847	1,970	345	274	619	3,084	2,303	5,387	
3	5	8	5	4	9	15	22	37	11
771	622	1,393	411	367	778	2,686	2,085	4,771	
774	627	1,401	416	371	787	2,701	2,107	4,808	
52	42	94	28	24	52	151	136	287	12
3,711	3,496	7,207	1,417	1,318	2,735	9,454	8,366	17,820	
3,763	3,538	7,301	1,445	1,342	2,787	9,605	8,502	18,107	

Annual Form No. IV.—Deaths registered according to age in the

1	2		Deaths under						
No.	District.	Not exceeding one month.						Total of columns 3 and 6.	
		Male.			Female.				
		Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.		
		1	2	3	4	5	6		7
ORISSA DIVISION—concl'd.									
13	Balasore district	{ Urban ...	21	6	27	22	9	31	58
		{ Rural ...	1,516	879	2,395	1,269	737	2,006	4,401
		{ Total ...	1,537	885	2,422	1,291	746	2,037	4,459
14	Angul district	{ Rural ...	287	267	554	262	206	468	1,022
		{ Total ...	287	267	554	262	206	468	1,022
15	Puri district	{ Urban ...	50	26	76	28	20	48	124
		{ Rural ...	1,351	1,018	2,369	1,186	867	2,053	4,422
		{ Total ...	1,401	1,044	2,445	1,214	887	2,101	4,546
16	Sambalpur district	{ Urban ...	12	8	20	17	16	33	53
		{ Rural ...	1,747	1,073	2,820	1,503	939	2,442	5,262
		{ Total ...	1,759	1,081	2,840	1,520	955	2,475	5,315
CHOTA NAGPUR DIVISION.									
17	Hazaribagh district	{ Urban ...	14	3	17	6	3	9	26
		{ Rural ...	1,216	456	1,672	918	398	1,316	2,988
		{ Total ...	1,230	459	1,689	924	401	1,325	3,014
18	Ranchi district	{ Urban ...	9	2	11	7	3	10	21
		{ Rural ...	1,148	485	1,633	885	407	1,292	2,925
		{ Total ...	1,157	487	1,644	892	410	1,302	2,946
19	Palamanu district	{ Urban ...	2	2	4	2	...	2	6
		{ Rural ...	1,271	465	1,736	975	385	1,360	3,096
		{ Total ...	1,273	467	1,740	977	385	1,362	3,102
20	Manbhum district	{ Urban ...	24	7	31	13	6	19	50
		{ Rural ...	1,016	347	1,363	843	242	1,085	2,443
		{ Total ...	1,040	354	1,394	856	248	1,104	2,498
21	Singbblum district	{ Urban ...	11	4	15	8	6	14	29
		{ Rural ...	414	112	526	350	108	458	984
		{ Total ...	425	116	541	358	114	472	1,013
Total for the Province	{ Urban ...	844	353	1,197	590	351	941	2,138	
	{ Rural ...	37,957	14,685	52,642	30,472	11,536	42,008	94,650	
	{ Total ...	38,801	15,038	53,839	31,062	11,887	42,949	96,788	
Total population for the province		...	...	...	...	...	...	...
Ratio per 1,000 of population		...	...	...	...	...	...	...

3									
one year.									
Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total male columns 3, 8 and 11.	Total female columns 6, 9 and 12.	Total.	No.
Male.	Female.	Total.	Male.	Female.	Total.				
8	9	10	11	12	13	14	15	16	
11	8	19	5	...	5	43	39	82	} 13
1,697	1,737	3,434	594	585	1,179	4,686	4,328	9,014	
1,708	1,745	3,453	599	585	1,184	4,729	4,367	9,096	
418	381	799	217	203	420	1,189	1,052	2,241	} 14
418	381	799	217	203	420	1,189	1,052	2,241	
33	38	71	22	18	40	131	104	235	} 15
1,558	1,358	2,916	778	701	1,479	4,705	4,112	8,817	
1,591	1,396	2,987	800	719	1,519	4,836	4,216	9,052	
5	11	16	13	10	23	38	54	92	} 16
1,060	975	2,035	662	600	1,262	4,542	4,017	8,559	
1,065	986	2,051	675	610	1,285	4,580	4,071	8,651	
17	14	31	8	5	13	42	28	70	} 17
1,060	889	1,949	461	383	844	3,193	2,588	5,781	
1,077	903	1,980	469	388	857	3,235	2,616	5,851	
10	10	20	10	3	13	31	23	54	} 18
1,064	879	1,943	483	441	924	3,180	2,612	5,792	
1,074	889	1,963	493	444	937	3,211	2,635	5,846	
2	1	3	1	6	7	7	9	16	} 19
742	709	1,451	517	492	1,009	2,995	2,561	5,556	
744	710	1,454	518	498	1,016	3,002	2,570	5,572	
10	22	32	6	4	10	47	45	92	} 20
746	542	1,288	269	216	485	2,378	1,843	4,221	
756	564	1,320	275	220	495	2,425	1,888	4,313	
9	5	14	4	10	14	28	29	57	} 21
274	224	498	101	85	186	901	767	1,668	
283	229	512	105	95	200	929	796	1,725	
744	651	1,395	528	486	1,014	2,469	2,078	4,547	
29,146	25,086	54,232	16,070	13,637	29,757	97,858	80,781	178,639	
29,890	25,737	55,627	16,598	14,173	30,771	100,327	82,859	183,186	
...	459,557	467,993	927,550	
...	218.3	177.0	197.5	

Annual Form No. IV.—Deaths registered according to age in the

1	2	3	4	5	6					
No.	District.	1 year and under 5 years.		5 years and under 10 years.		10 years and under 15 years.		15 years and under 20 years.		
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
		17	18	19	20	21	22	23	24	
PATNA DIVISION.										
1	Patna district	Urban ...	316	310	110	105	75	84	71	96
		Rural ...	6,209	6,521	1,520	1,380	710	567	533	565
		Total ..	6,525	6,831	1,630	1,485	785	651	604	661
2	Gaya district	Urban	339	271	90	70	40	48	55	92
		Rural ...	10,035	9,982	2,803	2,167	1,292	955	1,067	963
		Total ...	10,374	10,253	2,893	2,237	1,332	1,003	1,122	1,055
3	Shahabad district	Urban ...	90	70	24	22	11	13	13	27
		Rural ...	5,771	5,725	1,451	1,147	713	559	773	786
		Total ...	5,861	5,795	1,475	1,169	724	572	786	813
TIRHUT DIVISION.										
4	Saran district	Urban ...	136	133	41	37	36	23	30	28
		Rural ...	7,940	6,990	2,204	1,821	1,346	910	1,179	958
		Total ...	8,076	7,123	2,245	1,858	1,382	933	1,209	986
5	Champaran district	Urban ...	29	42	7	5	2	8	5	7
		Rural ...	5,309	4,671	1,468	1,126	848	519	830	635
		Total ...	5,338	4,713	1,475	1,131	850	527	835	642
6	Muzaffarpur district	Urban ...	127	144	39	36	27	34	35	42
		Rural ...	10,064	9,679	3,058	2,520	1,563	974	1,118	990
		Total ...	10,191	9,823	3,097	2,556	1,590	1,008	1,153	1,032
7	Darbhanga district	Urban ...	164	158	68	57	38	38	47	49
		Rural ...	9,834	8,929	3,523	2,695	1,765	1,187	1,376	1,015
		Total ...	9,998	9,087	3,591	2,752	1,803	1,225	1,423	1,064
BHAGALPUR DIVISION.										
8	Monghyr district	Urban ...	182	185	59	50	24	35	21	40
		Rural ...	9,545	9,653	2,421	2,010	1,194	928	865	780
		Total ...	9,727	9,838	2,480	2,060	1,218	963	886	820
9	Bhagalpur district	Urban ...	123	90	36	30	23	22	21	35
		Rural ...	5,722	5,342	2,235	1,612	1,132	810	980	872
		Total ...	5,845	5,432	2,271	1,642	1,155	832	1,001	907
10	Purnea district	Urban ...	28	29	16	12	27	9	14	11
		Rural ...	3,611	2,983	1,602	1,144	1,028	734	856	887
		Total ...	3,639	3,012	1,618	1,156	1,055	743	870	898
11	Santal Parganas district	Urban ...	9	11	7	6	3	4	6	5
		Rural ...	4,067	3,655	1,763	1,469	1,081	846	76	1,185
		Total ...	4,076	3,666	1,770	1,475	1,084	850	1,182	1,190
ORISSA DIVISION.										
12	Cuttack district	Urban ...	79	68	33	24	17	11	33	28
		Rural ...	6,538	6,648	1,977	1,844	1,86	905	1,211	1,738
		Total ...	6,617	6,716	2,010	1,868	1,003	916	1,244	1,766
13	Balasore district	Urban ...	11	17	5	5	2	1	7	11
		Rural ...	2,400	2,517	631	691	416	378	504	815
		Total ...	2,411	2,534	636	696	418	379	511	826

DIX I—contd.

districts of Bihar and Orissa Province, during the year 1931—contd.

7		8		9		10		11		12
20 years and under 30 years.		30 years and under 40 years.		40 years and under 50 years.		50 years and under 60 years.		60 years and upwards.		No.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
25	26	27	28	29	30	31	32	33	34	
175	216	129	137	180	117	138	90	294	274	1
1,366	1,896	1,446	1,512	1,638	1,455	1,736	1,463	4,432	4,706	
1,541	2,112	1,575	1,649	1,818	1,572	1,874	1,553	4,726	4,960	
153	177	117	91	147	88	120	79	207	215	2
2,575	3,231	2,494	2,624	2,631	2,143	2,912	2,427	4,216	4,404	
2,728	3,408	2,611	2,715	2,778	2,231	3,032	2,506	4,423	4,619	
41	60	27	25	35	20	45	29	79	86	3
2,208	2,730	2,131	2,326	1,931	1,617	1,735	1,753	3,627	4,808	
2,249	2,790	2,158	2,351	1,966	1,637	1,780	1,782	3,706	4,894	
43	93	52	58	67	52	69	51	100	103	4
2,878	2,838	3,456	3,015	2,940	2,300	2,856	2,557	6,898	7,531	
2,921	2,931	3,508	3,073	3,007	2,352	2,925	2,608	6,998	7,634	
11	26	13	13	11	4	12	10	26	26	5
2,462	2,285	2,869	2,370	2,869	2,083	2,616	2,265	3,725	3,796	
2,473	2,311	2,882	2,383	2,880	2,087	2,628	2,275	3,751	3,822	
78	70	77	53	59	43	66	39	135	128	6
3,456	2,831	4,090	3,235	3,872	2,907	4,082	3,396	6,861	8,125	
3,534	2,901	4,167	3,288	3,931	2,950	4,148	3,435	6,996	8,253	
89	107	134	78	99	66	90	71	126	97	7
3,904	3,487	4,454	3,404	4,269	2,952	4,113	3,646	6,279	6,951	
3,993	3,594	4,588	3,482	4,368	3,018	4,203	3,717	6,405	7,048	
63	77	45	48	41	29	34	28	105	105	8
2,129	2,417	2,290	2,237	2,436	1,899	2,828	2,494	4,934	5,150	
2,192	2,494	2,335	2,285	2,477	1,928	2,862	2,522	5,039	5,255	
45	55	37	37	46	39	38	26	96	61	9
2,540	2,437	2,685	2,360	2,570	1,997	2,345	2,107	3,176	3,257	
2,585	2,492	2,722	2,397	2,616	2,036	2,383	2,133	3,272	3,318	
17	27	23	14	26	19	18	14	26	25	10
2,478	3,093	2,911	2,489	2,474	1,709	2,047	1,700	2,380	2,102	
2,495	3,120	2,934	2,503	2,500	1,728	2,065	1,714	2,406	2,127	
14	11	4	6	3	4	6	2	10	9	11
2,238	2,384	2,187	1,892	1,914	1,488	1,564	1,318	2,418	2,418	
2,252	2,395	2,191	1,898	1,917	1,492	1,570	1,320	2,438	2,427	
111	97	84	80	96	62	92	66	101	91	12
3,001	4,449	3,193	3,555	3,017	2,763	3,213	3,386	3,857	4,735	
3,112	4,546	3,277	3,635	3,113	2,825	3,305	3,452	3,958	4,826	
19	21	14	13	11	5	19	14	27	20	13
1,424	2,330	1,665	1,833	1,570	1,533	1,616	1,730	1,596	1,906	
1,443	2,351	1,679	1,846	1,581	1,538	1,635	1,744	1,623	1,926	

Annual Form No. IV.—Deaths registered according to age in the

1	2	3	4	5	6					
No.	District.	1 year and under 5 years.		5 years and under 10 years.		10 years and under 15 years.		15 years and under 20 years.		
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
		17	18	19	20	21	22	23	24	
ORISSA DIVISION—concl'd.										
14	Angul district ...	{ Rural ...	688	657	155	152	88	76	99	101
		{ Total ...	688	657	155	152	88	76	99	101
15	Puri district ...	{ Urban ...	36	58	13	8	10	5	15	19
		{ Rural ...	2,512	2,618	666	606	340	256	390	676
		{ Total ...	2,548	2,676	679	614	350	261	405	695
16	Sambalpur district ...	{ Urban ...	27	18	11	4	3	6	10	9
		{ Rural ...	2,688	2,412	695	667	360	321	455	527
		{ Total ...	2,715	2,430	706	671	363	327	465	536
CHOTA NAGPUR DIVISION.										
17	Hazaribagh district ...	{ Urban ...	67	61	23	14	8	14	7	16
		{ Rural ...	4,261	4,018	1,428	1,235	776	545	612	653
		{ Total ...	4,328	4,079	1,451	1,249	784	559	619	669
18	Ranchi district ...	{ Urban ...	35	16	11	8	5	7	7	9
		{ Rural ...	5,125	4,423	1,242	1,000	729	640	763	717
		{ Total ...	5,160	4,439	1,253	1,003	734	647	770	726
19	Palamau district ...	{ Urban ...	12	9	3	...	3	3	1	5
		{ Rural ...	4,120	3,793	969	781	471	349	390	377
		{ Total ...	4,132	3,802	972	781	474	352	381	382
20	Manbhum dlistrict ..	{ Urban ...	50	36	10	12	16	5	8	29
		{ Rural ...	2,508	2,367	1,101	838	854	677	1,204	1,040
		{ Total ...	2,558	2,403	1,111	850	870	682	1,212	1,069
21	Singhbhum district ...	{ Urban ...	24	29	9	4	2	5	6	6
		{ Rural ...	1,334	1,268	526	528	305	252	398	341
		{ Total ...	1,358	1,297	535	532	307	257	404	347
	Total for the Province ...	{ Urban ...	1,884	1,755	615	509	372	375	412	564
		{ Rural ...	110,281	104,851	33,438	27,433	17,997	13,388	16,769	16,621
		{ Total ..	112,165	106,606	34,053	27,942	18,369	13,763	17,181	17,185
Total population for the province ...			2,274,148	2,400,907	2,642,921	2,430,279	2,302,350	2,043,919	1,563,970	1,620,928
Ratio per 1,000 of population ...			49.3	44.4	12.9	11.5	7.9	6.7	11.0	10.6

DIX I—contd.

districts of Bihar and Orissa Province, during the year 1931—concl.

7		8		9		10		11		12
20 years and under 30 years.		30 years and under 40 years.		40 years and under 50 years.		50 years and under 60 years.		60 years and upwards.		No.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
25	26	27	28	29	30	31	32	33	34	
187	280	220	220	195	166	222	235	265	307	14
187	280	220	220	195	166	222	235	265	307	
56	50	83	43	103	49	103	56	112	116	15
1,095	1,816	1,142	1,198	1,294	1,083	1,576	1,488	1,597	1,960	
1,151	1,866	1,225	1,241	1,397	1,132	1,682	1,544	1,809	2,076	16
17	21	13	22	17	18	15	7	14	21	
907	1,259	1,067	907	996	770	1,132	1,029	1,450	1,614	17
924	1,280	1,080	929	1,013	788	1,147	1,036	1,464	1,635	
21	25	8	18	14	8	12	16	16	27	18
1,369	1,624	1,348	1,166	1,189	917	1,399	1,347	1,521	1,617	
1,390	1,649	1,356	1,184	1,203	925	1,411	1,363	1,537	1,644	19
9	16	9	7	16	12	9	10	21	16	
1,240	1,444	1,190	1,084	1,208	976	1,644	1,657	1,639	1,744	20
1,249	1,460	1,199	1,091	1,224	988	1,653	1,667	1,660	1,760	
2	2	1	3	...	1	6	7	2	9	21
917	1,047	963	907	896	749	771	800	760	810	
919	1,049	964	910	896	750	777	807	762	819	22
18	23	28	21	19	12	20	14	54	34	
1,674	1,574	1,732	1,312	1,453	970	1,364	1,163	1,857	1,642	23
1,692	1,597	1,760	1,333	1,472	982	1,384	1,177	1,911	1,676	
10	15	23	14	11	6	12	13	24	20	24
746	612	731	538	704	445	679	659	706	833	
756	627	754	552	715	451	691	672	730	853	25
992	1,189	921	781	1,001	654	927	642	1,575	1,483	
40,794	46,064	44,264	40,184	42,066	32,922	42,450	38,620	64,304	70,416	26
41,786	47,253	45,185	40,965	43,067	33,576	43,377	39,262	65,879	71,899	
3,218,213	3,422,319	2,714,059	2,737,421	1,865,043	1,811,586	1,069,752	1,099,899	684,125	848,187	
13.0	13.8	16.6	15.0	23.0	18.5	40.5	35.7	96.3	84.8	

Annual Form No. V.—Deaths registered according to class in the

1	2	3											
No	District.	Population according to											
		Christians.			Hindus.			Muhammadans.			Buddhists.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
	PATNA DIVISION.												
1	Patna ...	1,990	1,513	3,503	852,682	787,147	1,639,829	101,175	101,480	202,655	15	1	16
2	Gaya ...	298	278	576	1,075,495	1,058,046	2,133,541	117,436	136,124	253,560	13	6	19
3	Shahabad ...	1,083	1,252	2,335	924,382	914,580	1,838,862	73,260	78,108	151,368	5	6	11
	TIRHUT DIVISION.												
4	Saran ...	282	178	460	1,072,048	1,104,936	2,176,984	147,703	161,302	309,005	...	...	...
5	Champaran ...	1,681	1,974	3,655	903,010	884,264	1,787,274	175,988	178,247	354,235	...	...	...
6	Muzaffarpur ...	481	406	887	1,258,489	1,290,517	2,549,006	184,852	206,239	391,091	1	...	1
7	Darbhanga ...	286	245	531	1,354,928	1,370,499	2,725,427	215,663	224,374	440,037	...	...	...
	BHAGALPUR DIVISION.												
8	Monghyr ...	1,058	859	1,917	1,031,465	1,017,727	2,049,192	109,408	119,089	228,497	3	1	4
9	Bhagalpur ...	881	679	1,560	1,002,664	977,598	1,980,262	125,257	124,179	249,436	...	...	...
10	Purnea ...	973	850	1,823	665,451	619,863	1,285,314	456,347	430,021	886,368	...	...	...
11	Santal Parganas ...	6,464	6,882	13,346	475,601	473,597	949,198	112,839	110,863	223,702	...	...	...
	ORISSA DIVISION.												
12	Cuttack ...	1,222	1,651	2,873	996,424	1,110,406	2,106,830	29,965	36,139	66,104	209	183	392
13	Balasore ...	685	690	1,375	457,943	486,738	944,681	15,661	16,074	31,735	1	...	1
14	Angul ...	156	151	307	80,344	83,319	163,663	176	117	293	...	...	...
15	Puri ...	768	768	1,536	488,555	522,524	1,011,079	10,875	11,643	22,518	2	1	3
16	Sambalpur ...	1,780	1,838	3,618	426,029	444,149	870,178	2,008	1,805	3,813	...	...	...
	CHOTA NAGPUR DIVISION.												
17	Hazaribagh ...	1,706	1,463	3,169	597,528	610,571	1,208,099	84,799	86,895	171,694	135	86	221
18	Ranchi ...	130,114	132,494	262,608	433,323	436,169	869,492	33,778	32,269	66,047	9	4	13
19	Palamau ...	4,242	4,365	8,607	335,519	334,442	669,961	37,369	37,132	74,501	..	...	...
20	Manbhum ...	3,922	3,734	7,656	824,012	768,515	1,592,527	61,712	49,665	111,377	2	4	6
21	Singhbhum ...	10,056	9,496	19,552	237,465	222,610	460,075	16,543	10,211	26,754	153	74	232
	Total for the Province	170,128	171,766	341,894	15,493,257	15,518,217	31,011,474	2,112,814	2,151,976	4,264,790	553	366	919

districts of Bihar and Orissa Province, during the year 1931—contd.

						4									
census, 1931.						Number of deaths registered.									
Other classes.			Total.			Christians.			Hindus.			Muhammadans.			No.
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
262	209	471	956,124	890,350	1,846,474	5	9	14	25,662	24,898	50,560	2,217	2,147	4,364	1
401	365	766	1,193,643	1,194,819	2,388,462	2	...	2	37,947	35,166	73,113	3,519	3,376	6,925	2
469	444	913	999,099	994,390	1,993,489	1	4	5	27,501	26,896	54,397	1,595	1,564	3,159	3
16	3	19	1,220,049	1,266,419	2,486,468	2	1	3	34,856	30,922	65,778	3,951	3,392	7,343	4
277	246	523	1,080,956	1,064,731	2,145,687	24	25	49	24,799	21,151	45,950	3,624	2,887	6,511	5
24	16	40	1,443,847	1,497,178	2,941,025	3	3	6	39,921	36,165	76,086	4,568	3,870	8,438	6
82	17	99	1,570,959	1,595,135	3,166,094	1	2	3	40,486	35,003	75,489	4,699	3,721	8,420	7
3,863	3,681	7,544	1,145,797	1,141,357	2,287,154	5	...	5	31,989	30,117	62,106	2,734	2,623	5,357	8
1,782	1,592	3,374	1,130,584	1,104,048	2,234,632	3	4	7	24,957	22,104	47,061	2,384	1,975	4,359	9
6,910	6,128	13,038	1,129,681	1,056,862	2,186,543	2	5	7	13,678	11,823	25,501	8,964	7,461	16,425	10
431,017	434,209	865,226	1,025,921	1,025,551	2,051,472	72	56	128	12,514	11,228	23,742	2,505	2,360	4,865	11
314	194	508	1,028,134	1,148,573	2,176,707	13	3	16	36,326	38,144	74,470	900	903	1,803	12
6,224	6,580	12,808	480,518	510,082	990,600	6	14	20	16,064	17,588	33,652	438	480	918	13
28,249	30,224	58,473	108,925	113,811	222,736	3	3	6	2,280	2,276	4,556	...	4	4	14
14	4	18	500,214	534,940	1,035,154	14	10	24	15,846	16,038	31,884	222	273	495	15
1,643	1,693	3,336	431,460	449,485	880,945	18	10	28	14,386	13,642	28,028	27	25	52	16
67,788	66,386	134,174	751,956	765,401	1,517,357	5	7	12	15,426	14,232	29,658	1,532	1,390	2,922	17
179,839	189,150	368,989	777,063	790,086	1,567,149	2,152	1,931	4,083	4,802	4,251	9,053	632	549	1,181	18
32,648	33,019	65,667	409,778	408,958	818,736	92	83	175	12,065	11,060	23,125	982	932	1,914	19
50,361	48,963	99,324	940,009	870,881	1,810,890	26	9	35	14,118	11,849	25,967	761	594	1,355	20
205,199	217,990	423,189	469,421	460,381	929,802	59	76	135	3,227	2,709	5,936	104	62	166	21
1,017,386	1,041,113	2,058,499	18,794,138	18,883,438	37,677,576	2,508	2,255	4,763	448,850	417,265	866,115	46,388	40,588	86,976	

Annual Form No. V.—Deaths registered according to class in the

1	2	3												
No.	District.	Number of deaths registered — <i>concl'd.</i>									Ratio of deaths			
		Buddhists.			Other classes.			Total.			Christians.			
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
	PATNA DIVISION.													
1	Patna ... ..	...	...	...	2	1	3	27,886	27,055	54,941	2·5	6·0	4·0
2	Gaya ... ..	...	...	...	5	1	6	41,503	38,543	80,046	6·7	...	3·5
3	Shahabad ... ..	...	...	...	...	...	...	29,097	28,464	57,561	0·9	3·2	2·1
	TIRHUT DIVISION.													
4	Saran ... ..	...	...	...	...	...	...	38,809	34,315	73,124	7·1	5·6	6·5
5	Champaran ... ..	...	...	...	...	...	...	28,447	24,063	52,510	14·0	12·7	13·4
6	Muzaffarpur ... ..	...	...	...	...	...	...	44,492	40,038	84,530	6·2	7·4	6·7
7	Darbhanga ... ..	...	...	...	...	...	...	45,186	38,729	83,915	3·5	8·2	5·6
	BHAGALPUR DIVISION.													
8	Monghyr ... ..	...	...	...	5	2	7	34,733	32,742	67,475	4·6	...	2·6
9	Bhagalpur ... ..	...	...	...	8	4	12	27,352	24,087	51,439	3·4	6·0	4·5
10	Purnea ... ..	...	...	...	22	15	37	22,666	19,304	41,970	2·0	5·9	3·8
11	Santal Parganas ... ..	...	...	...	6,090	5,176	11,266	21,181	18,820	40,001	11·1	8·1	9·6
	ORISSA DIVISION.													
12	Cuttack ... ..	...	...	...	5	2	7	37,244	39,052	76,296	10·6	1·8	5·6
13	Balasore ... ..	...	...	...	158	125	283	16,666	18,207	34,873	8·8	20·3	14·5
14	Angul ... ..	...	...	...	1,025	963	1,988	3,308	3,246	6,554	19·2	19·8	19·5
15	Puri ... ..	...	...	...	...	...	...	16,082	16,321	32,403	18·2	13·0	15·6
16	Sambalpur ... ..	...	...	...	26	26	52	14,457	13,703	28,160	10·1	5·4	7·7
	CHOTA NAGPUR DIVISION.													
17	Hazaribagh ... ..	...	...	...	351	308	659	17,314	15,937	33,251	2·9	4·8	3·7
18	Ranchi ... ..	...	...	...	10,527	9,690	20,217	18,113	16,421	34,534	16·5	14·6	15·5
19	Palamau ... ..	...	...	...	140	147	287	13,279	12,222	25,501	21·7	19·0	20·3
20	Manbhum ... ..	...	...	...	1,490	1,205	2,695	16,395	13,657	30,052	6·6	2·4	4·6
21	Singhbhum ... ..	...	...	...	3,789	3,537	7,326	7,179	6,384	13,563	5·8	8·0	6·1
	Total for the Province	...	...	..	23,643	21,202	44,845	521,389	481,310	1,002,699	14·7	13·1	13·9

DIX I—contd.

districts of Bihar and Orissa Province, during the year 1931—concl'd.

4												5			
per 1,000 of population.															
Hindus.			Muhammadans.			Buddhists.			Other classes.			Total.			
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	No.
30.1	31.6	30.8	21.9	21.1	21.5	...	...	...	7.6	4.8	6.4	29.2	30.4	29.7	1
36.8	34.3	35.6	34.2	26.9	30.2	...	...	...	12.2	2.7	7.8	34.8	32.2	33.5	2
29.8	29.4	29.6	21.8	20.1	20.9	...	...	...	...	...	...	29.1	28.6	28.9	3
32.5	27.9	30.2	26.7	21.0	23.7	...	...	...	...	...	...	31.8	27.1	29.4	4
27.5	23.9	25.7	20.6	16.2	18.4	...	...	...	...	..	...	26.3	22.6	24.5	5
31.7	28.0	29.8	24.7	18.8	21.6	...	...	...	...	..	...	30.8	26.7	28.7	6
29.9	25.5	27.8	21.8	16.6	19.1	...	...	...	...	...	...	28.8	24.3	26.5	7
31.0	29.6	30.3	24.9	22.0	23.4	...	...	...	1.3	0.5	0.9	30.3	28.7	29.5	8
24.9	22.6	23.8	19.0	15.9	18.5	..	...	...	4.5	2.5	3.5	24.2	21.8	23.0	9
20.5	19.1	19.8	19.6	17.3	18.5	...	...	...	3.1	2.4	2.8	20.0	18.2	19.2	10
26.3	23.7	25.0	22.2	21.3	21.7	...	...	...	14.1	11.9	13.0	20.6	18.3	19.5	11
36.4	34.3	35.3	30.0	25.0	27.3	...	...	...	15.9	10.3	13.8	36.2	34.0	35.0	12
35.1	36.1	35.6	28.0	29.9	28.9	...	...	...	25.4	19.0	22.1	34.7	35.7	35.2	13
28.3	27.3	27.8	...	34.1	13.6	...	...	...	36.2	31.8	33.9	30.3	28.5	29.4	14
32.4	30.7	31.5	20.4	23.5	21.1	...	...	...	...	...	...	32.1	30.3	31.3	15
33.3	30.4	32.2	13.4	13.9	13.6	...	...	...	15.8	15.4	15.6	33.5	30.5	32.0	16
25.8	23.3	24.5	18.1	15.9	17.0	...	...	...	5.2	4.6	4.9	23.0	20.8	21.9	17
11.1	9.7	10.4	18.7	17.0	17.9	...	...	...	58.5	51.2	54.8	23.3	20.8	22.0	18
35.9	33.1	34.5	26.3	25.1	25.7	...	...	...	4.3	4.4	4.4	32.4	29.9	31.1	19
17.1	15.4	16.3	12.3	11.9	12.2	...	...	..	29.6	24.6	27.1	17.5	15.7	16.6	20
13.5	12.2	12.9	6.3	6.1	6.2	...	...	...	18.4	16.2	17.3	15.3	13.8	14.6	21
28.9	26.9	27.9	21.9	18.8	20.4	...	...	...	23.2	20.3	21.8	27.7	25.5	26.6	

Annual Form no. VA.—Death rates according to class, urban and rural areas separately in each district of Bihar and Orissa province during the year 1931.

Number.	Districts.		Christians.	Hindus.	Muhammadans.	Buddhists.	Other classes.	Total
1	2		3	4	5	6	7	8
1	Patna	... { Urban ...	4.4	15.4	11.4	...	4.2	14.2
		... { Rural ...	2.0	32.8	26.8	...	8.5	32.3
2	Gaya	... { Urban ...	0.2	30.7	15.4	...	...	28.8
		... { Rural ...	14.9	34.4	27.7	...	18.5	33.7
3	Shahabad	... { Urban ...	...	8.6	8.2	...	...	8.4
		... { Rural ...	2.6	30.6	24.1	...	...	30.2
4	Saran	... { Urban ...	...	22.7	17.9	...	...	21.4
		... { Rural ...	8.8	30.4	24.1	...	...	29.7
5	Champaran	... { Urban ...	22.6	6.1	7.3	...	...	7.2
		... { Rural ...	4.3	26.0	18.8	...	...	24.8
6	Muzaffarpur	... { Urban ...	3.6	20.4	18.1	...	...	19.8
		... { Rural ...	1.2	30.1	21.7	...	...	29.0
7	Darbhanga	... { Urban ...	7.9	21.4	15.1	...	...	19.7
		... { Rural ...	...	27.9	19.4	...	...	26.7
8	Monghyr	... { Urban ...	1.5	20.6	15.3	...	...	19.3
		... { Rural ...	5.0	30.6	24.1	...	0.9	29.9
9	Bhagalpur	... { Urban ...	1.3	12.7	7.9	...	22.3	11.6
		... { Rural ...	7.7	24.1	18.5	...	2.5	23.5
10	Purnea	... { Urban ...	3.2	9.8	8.7	...	...	9.4
		... { Rural ...	3.9	20.1	18.7	...	2.9	19.3
11	Santal Parganas	... { Urban ...	...	3.4	2.4	...	7.5	3.2
		... { Rural ...	10.2	25.9	22.5	...	13.0	19.8
12	Cuttack	... { Urban ...	4.1	17.4	13.3	...	37.0	16.5
		... { Rural ...	13.3	36.0	30.7	...	11.0	35.8
13	Balasore	... { Urban ...	12.3	16.6	19.9	...	...	17.0
		... { Rural ...	15.7	35.9	30.1	...	22.3	35.5
14	Angul	... { Urban ...	...	...	...	...	...	...
		... { Rural ...	19.5	27.8	13.6	...	33.9	29.4
15	Puri	... { Urban ...	10.0	31.4	25.2	...	...	31.2
		... { Rural ...	16.5	31.5	21.9	...	...	31.3
16	Sambalpur	... { Urban ...	4.1	23.9	14.8	...	42.6	23.0
		... { Rural ...	8.0	32.3	13.1	...	15.2	32.1
17	Hazaribagh	... { Urban ...	0.9	9.9	6.7	...	...	8.7
		... { Rural ...	5.2	25.0	17.8	...	4.9	22.4
18	Ranchi	... { Urban ...	4.8	9.0	4.0	...	13.4	4.7
		... { Rural ...	15.9	10.6	21.6	...	55.2	22.7
19	Palamau	... { Urban ...	...	6.6	6.3	...	100.0	7.0
		... { Rural ...	20.7	34.9	26.3	...	4.3	31.5
20	Manbhum	... { Urban ...	5.9	9.1	5.3	...	...	8.9
		... { Rural ...	4.2	16.5	12.6	...	27.1	16.8
21	Singhbhum	... { Urban ...	6.9	8.9	6.0	...	34.9	9.4
		... { Rural ...	6.9	13.1	6.2	...	17.2	14.7
Total for the Province			5.6	16.2	11.9	...	16.4	14.9
			14.6	28.3	21.1	...	21.8	27.1

APPENDIX I.

Annual Form no. VI.

Annual Form No. VI.—Deaths registered from different causes in the

1	2	3	4				5	6	7	8	9	10
No.	Districts and Towns.	Population according to Census of 1921.	Births.				Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.
			Male.	Female.	Total.	Birth rate.						
DISTRICTS EXCLUDING TOWNS.												
PATNA DIVISION.												
1	Patna ...	15,83,190	29,535	28,150	57,685	36·3	4,726	321	67	30,351	1,487	1,171
2	Gaya ...	2,283,277	50,125	47,751	97,876	42·8	7,075	707	66	55,162	265	57
3	Shahabad ...	1,875,839	35,827	34,168	69,995	37·3	3,739	816	...	41,424	24	12
TIRHUT DIVISION												
4	Saran ...	2,415,993	43,479	43,027	86,506	35·8	1,925	639	1,285	41,829	1,051	676
5	Champaran ...	2,100,201	33,605	32,211	65,816	31·3	613	182	...	43,558	19	3
6	Muzaffarpur ...	2,858,784	47,269	46,003	93,272	32·6	243	156	1,682	72,497	37	35
7	Darbhanga ...	3,067,869	49,944	48,244	93,188	32·0	957	334	1,131	72,614	93	7
BHAGALPUR DIVISION.												
8	Monghyr ...	2,203,945	40,761	40,215	80,976	36·7	3,915	398	1,117	50,039	124	36
9	Bhagalpur ...	2,145,552	32,501	31,287	63,788	29·7	3,874	111	...	42,069	63	21
10	Purnea ...	2,140,380	30,980	29,163	60,143	28·1	398	99	...	38,882	38	13
11	Santal Parganas ...	2,002,936	29,350	29,496	59,346	29·6	1,359	691	...	33,054	231	254
ORISSA DIVISION.												
12	Cuttack ...	2,088,151	39,068	36,583	75,651	36·2	5,180	1,201	...	34,094	11,160	1,273
13	Balasore ...	972,757	17,191	16,332	33,523	34·5	1,999	192	...	19,204	585	68
14	Angul ...	222,736	5,627	5,328	10,955	49·1	3	...	...	5,451	55	15
15	Puri ...	997,536	19,561	18,566	38,127	38·2	1,068	133	...	11,418	4,378	1,253
16	Sambalpur ...	865,928	18,419	17,769	36,188	41·7	359	1,058	...	13,047	2,427	1,158
CHOTA NAGPUR DIVISION.												
17	Hazaribagh ...	1,466,590	28,451	27,661	56,112	38·2	1,483	156	...	26,306	65	24
18	Ranchi ...	1,509,055	27,585	26,796	54,381	36·0	46	70	...	29,329	548	61
19	Palamau ...	806,696	18,440	17,908	36,348	45·0	483	184	...	20,845	17	2
20	Manbhum ...	1,754,497	24,669	23,325	47,994	27·4	441	111	...	25,905	70	77
21	Singhbhum ...	899,105	12,009	11,761	23,770	26·4	38	153	...	11,497	23	8
Total for the Province		36,265,937	634,896	611,744	1,246,640	34·4	39,924	7,712	5,348	718,575	22,710	6,224
TOWNS.												
PATNA DISTRICT.												
1	Patna City ...	159,690	1,476	1,329	2,805	17·5	116	11	...	1,085	137	164
2	Bihar ...	46,994	439	385	824	17·5	56	11	...	231	40	19
3	Dinapore ...	24,221	308	290	598	24·7	10	4	...	177	24	30
4	Barh ...	9,750	144	119	263	26·9	4	1	...	126	13	6
5	Khagole ...	7,412	71	62	133	17·9	7	5	...	72	8	9
GAYA DISTRICT.												
6	Gaya ...	88,005	960	892	1,852	21·0	162	49	...	1,622	58	56
7	Tikari ...	5,481	103	103	212	38·7	8	...	...	144	1	1
8	Daudnagar ...	11,699	195	188	383	32·7	1	9	...	146	8	2

DIX I—contd.

districts and towns of Bihar and Orissa Province, during the year 1931—contd.

11						12	13	14										15
Injuries.						All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population.										No.
Suicide.		Wounds or accidents.	Snake-bite or killed by wild animals.	Rabies.	Total.			Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.		
Male.	Female.															For the year.	Mean of previous five years.	
98	125	192	204	4	623	12,565	51,261	2.9	0.2	0.04	19.2	0.9	0.7	0.4	7.9	32.3	28.7	1
24	35	101	212	17	389	13,296	77,017	3.1	0.3	0.03	24.1	0.1	0.02	0.2	5.8	33.7	29.8	2
29	67	160	134	3	393	10,166	56,574	2.0	0.4	...	22.1	0.01	0.006	0.2	5.4	30.2	28.9	3
68	110	379	511	11	1,079	23,132	71,616	0.8	0.3	0.5	17.3	0.5	0.3	0.5	9.5	29.7	24.8	4
9	9	220	350	4	592	7,217	52,184	0.3	0.08	...	20.7	0.009	0.001	0.3	3.4	24.8	25.7	5
31	32	474	676	14	1,227	7,025	82,902	0.08	0.05	0.6	25.4	0.01	0.01	0.4	2.5	29.0	29.8	6
29	29	417	575	8	1,058	5,790	81,984	0.3	0.1	0.4	23.7	0.03	0.002	0.3	1.9	26.7	27.6	7
13	13	121	424	3	574	9,667	65,870	1.8	0.2	0.5	22.7	0.05	0.01	0.3	4.3	29.9	28.8	8
33	30	79	229	6	377	3,892	50,407	1.8	0.05	...	19.6	0.03	0.01	0.2	1.8	23.5	25.3	9
43	63	74	229	3	412	1,693	41,535	0.2	0.04	...	18.2	0.02	0.006	0.2	0.8	19.4	25.0	10
52	62	135	301	6	556	3,699	39,844	0.7	0.3	...	16.5	0.1	0.1	0.3	1.8	19.8	20.4	11
89	334	463	211	41	1,138	20,790	74,836	2.5	0.6	...	16.3	5.3	0.6	0.5	9.9	35.8	32.0	12
38	91	191	135	10	465	12,056	34,569	2.1	0.2	...	19.7	0.6	0.07	0.5	12.4	35.5	31.7	13
14	21	57	51	2	145	885	6,554	0.01	...	...	24.4	0.2	0.06	0.6	3.9	29.4	29.6	14
30	68	210	80	5	393	12,587	31,230	1.1	0.1	...	11.4	4.4	1.2	0.4	12.6	31.3	30.5	15
27	16	96	53	3	195	9,571	27,815	0.4	1.2	...	15.1	2.8	1.3	0.3	11.0	32.1	27.0	16
45	60	148	98	3	354	4,418	32,806	1.0	0.1	...	17.9	0.04	0.02	0.2	3.0	22.4	26.2	17
21	27	153	169	9	379	3,824	34,257	0.03	0.04	...	19.4	0.3	0.04	0.2	2.5	22.7	22.9	18
19	27	78	103	3	230	3,655	25,416	0.6	0.2	...	25.8	0.02	0.002	0.3	4.5	31.5	31.3	19
39	28	121	80	2	270	2,677	29,551	0.3	0.06	...	14.8	0.04	0.04	0.2	1.5	16.8	17.7	20
19	22	48	138	1	228	1,326	13,273	0.04	0.2	...	12.8	0.02	0.009	0.2	1.5	14.7	16.3	21
770	1,269	3,917	4,963	158	11,077	169,931	981,501	1.1	0.2	0.1	19.8	0.6	0.2	0.3	4.7	27.1	26.7	
15	13	44	4	1	77	536	2,066	0.7	0.06	...	6.8	0.8	0.6	0.5	3.3	12.9	16.4	1
2	5	5	1	...	13	163	553	1.2	0.2	...	4.9	0.8	0.4	0.2	3.9	11.7	20.7	2
3	3	7	...	...	13	154	412	0.4	0.2	...	7.3	1.0	1.2	0.5	6.3	17.0	24.4	3
...	...	6	3	...	9	59	218	0.4	0.1	...	12.9	1.3	0.6	0.9	6.0	22.3	27.4	4
...	...	4	...	...	4	29	134	0.9	0.7	...	9.7	1.1	1.2	0.5	4.0	18.1	24.3	5
6	5	42	1	...	54	658	2,659	1.8	0.5	...	18.4	0.6	0.6	0.6	7.5	30.2	43.1	6
...	...	1	...	...	1	5	160	1.4	...	...	26.3	0.2	0.2	0.2	0.9	29.2	27.1	7
...	...	3	1	...	4	40	210	0.08	0.8	...	12.5	0.7	0.2	0.3	3.4	17.9	22.7	8

Annual Form No. VI.—Deaths registered from different causes in the

1	2	3	4				5	6	7	8	9	10
No.	Districts and Towns.	Population according to census of 1931.	Births.				Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.
			Male.	Female.	Total.	Birth-rate.						
TOWNS—contd.												
SHAHABAD DISTRICT.												
9	Arrah	48,922	384	279	663	13·5	6	4	1	181	8	5
10	Buxar	13,449	194	176	370	27·5	4	4	...	87	3	4
11	Dumraon	14,421	108	114	222	15·4	2	2	...	41	2	2
12	Jagadispur	9,661	162	151	313	32·4	...	2	...	62	2	1
13	Sasaram	25,175	394	341	735	29·2	21	14	...	189	18	10
14	Bhabhua	6,002	67	65	132	22·0	9	7	...	61	4	1
SARAN DISTRICT.												
15	Chapra	47,448	637	569	1,206	25·4	33	...	...	404	67	51
16	Revelganj... ..	8,812	205	207	412	46·8	38	2	2	123	37	16
17	Siwan	14,215	335	357	692	48·7	21	...	...	124	8	4
CHAMPABAN DISTRICT.												
18	Bettiah	27,941	208	226	434	15·5	...	2	...	129	1	...
19	Motihari	17,545	182	184	366	20·9	...	...	...	128	4	3
MUZAFFARPUR DISTRICT.												
20	Muzaffarpur	43,049	584	557	1,141	26·5	2	...	2	304	52	43
21	Sitamarhi... ..	10,701	150	134	284	26·5	...	...	...	144	15	7
22	Hajipur	19,299	306	303	609	31·6	19	2	12	217	40	19
23	Lalganj	9,192	149	158	307	33·4	...	...	1	145	17	10
DARBHANGA DISTRICT.												
24	Darbhanga	60,676	1,110	993	2,103	34·7	1	1	...	434	75	27
25	Roserah	8,869	123	99	222	25·0	...	...	47	45	10	3
26	Samastipur	9,891	103	100	208	21·0	1	5	...	39	10	8
27	Madhubani	18,789	220	236	456	24·3	19	..	...	129	...	1
MONGHYR DISTRICT.												
28	Monghyr	52,863	765	684	1,449	27·4	94	30	...	293	86	34
29	Jamalpur	30,346	512	501	1,013	33·4	84	13	16	265	37	5
BHAGALPUR DISTRICT.												
30	Bhagalpur	83,847	719	559	1,278	15·2	57	16	...	560	34	36
31	Colgong	5,233	92	58	150	28·7	2	...	...	98	2	1
PURNEA DISTRICT.												
32	Purnea	15,474	129	102	231	14·9	13	...	...	206	1	4
33	Kishenganj	8,946	65	67	132	14·7	1	...	...	58	2	3
34	Katihar	15,864	80	94	174	10·9	...	...	...	54	...	...
35	Forbesganj	5,939	96	94	190	32·0	1	...	...	56	6	5

DIX I—contd.

districts and towns of Bihar and Orissa Province, during the year 1931—contd.

11						12	13	14											15
Injuries.						All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population.											No.
Suicide.		Wounds or accidents.	Snake-bite or killed by wild animals.	Babies.	Total.			Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.			
Male.	Female.															For the year.	Mean of previous five years.		
...	1	2	...	1	4	85	294	0·1	0·08	0·02	3·7	0·2	0·1	0·08	1·8	6·0	15·8	9	
...	...	4	...	...	4	31	137	0·3	0·3	...	6·5	0·2	0·3	0·3	2·3	10·2	20·6	10
...	...	...	...	...	...	9	58	0·1	0·1	...	2·8	0·1	0·1	...	0·6	4·0	9·6	11
...	...	1	1	...	2	30	99	...	0·2	...	6·4	0·2	0·1	0·2	3·1	10·2	19·7	12	
...	...	8	...	...	8	46	306	0·8	0·6	...	7·5	0·7	0·4	0·3	1·8	12·2	16·8	13
...	...	2	...	...	2	9	93	1·5	1·2	...	10·2	0·7	0·1	0·3	1·5	15·5	20·6	14
5	2	35	3	...	45	836	936	0·7	...	...	8·5	1·4	1·1	0·9	7·1	19·7	22·5	15
...	2	5	3	...	10	61	289	4·3	0·2	0·2	13·9	4·2	1·8	1·1	7·0	32·8	23·9	16	
...	...	...	...	...	...	126	283	1·4	...	...	8·8	0·5	0·3	...	8·9	19·9	16·8	17
...	...	2	1	...	3	30	165	...	0·07	...	4·6	0·03	...	0·1	1·1	5·9	13·9	18	
...	...	...	1	...	1	25	161	...	...	...	7·3	0·2	0·2	0·06	1·4	9·2	18·6	19
...	1	44	2	...	47	281	731	0·05	...	0·05	7·0	1·2	1·0	1·0	6·5	16·9	28·6	20	
...	...	10	...	...	10	29	205	...	...	...	13·5	1·4	0·5	0·9	2·7	19·2	21·8	21
1	...	20	4	1	26	121	456	1·0	0·1	0·6	11·2	2·1	1·0	1·3	6·2	23·6	30·4	22	
...	1	2	3	...	6	57	236	...	...	0·1	15·8	1·8	1·1	0·6	6·2	25·6	36·1	23
...	...	17	6	...	23	763	1,824	0·02	0·02	...	7·2	1·2	0·4	0·4	12·6	21·8	30·8	24	
...	...	...	...	...	...	92	197	...	...	5·3	5·1	1·1	0·3	...	10·3	22·2	18·6	25
3	...	7	1	...	11	66	140	0·1	0·5	...	3·9	1·0	0·8	1·1	6·7	14·2	20·6	26	
2	3	...	...	...	5	116	270	1·0	...	...	6·9	...	0·05	0·3	6·2	14·4	22·4	27
...	...	12	8	...	15	379	931	1·8	0·6	...	5·5	1·6	0·6	0·3	7·1	17·6	22·8	28	
...	...	2	...	...	2	252	674	2·8	0·4	0·5	8·7	1·2	0·2	0·06	8·3	22·2	27·4	29
...	2	5	...	...	7	206	916	0·7	0·2	...	6·7	0·4	0·4	0·08	2·4	10·9	16·5	30
6	...	...	...	...	6	7	116	0·4	...	...	18·7	0·4	0·2	1·1	1·3	22·2	24·4	31
1	...	...	...	...	1	4	229	0·8	...	...	13·3	0·06	0·2	0·06	0·2	14·8	13·9	32
1	1	...	...	...	2	9	75	0·1	...	...	6·5	0·2	0·3	0·2	1·0	8·4	12·1	33
...	...	...	1	...	1	5	60	...	...	...	3·4	...	...	0·06	0·3	3·8	8·0	34
...	2	...	...	...	2	1	71	0·2	...	...	9·4	1·0	0·8	0·3	0·2	11·9	14·7	35

Annual Form No. VI.--Deaths registered from different causes in the

1	2	3	4				5	6	7	8	9	10
No.	Districts and Towns.	Population according to Census of 1931.	Births.				Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhoea.	Respiratory diseases.
			Male.	Female.	Total.	Birth rate.						
	TOWNS—concl'd.											
	SANTAL PARGANAS DISTRICT.											
36	Sahibganj ...	15,833	71	66	137	8·6	11	4	...	34	2	...
37	Deoghar ...	14,217	12	14	26	1·8	...	2	...	11	5	...
38	Dumka ...	9,471	55	38	93	9·8	...	3	...	39	...	...
39	Madhupur...	8,965	18	23	41	4·6	1	2	...	17	1	...
	CUTTACK DISTRICT.											
40	Cuttack ...	65,263	489	493	982	15·0	63	2	...	216	91	65
41	Kendrapara ...	12,620	161	153	314	24·8	20	1	...	226	73	6
42	Jajpur ...	10,673	94	83	177	16·6	28	...	...	124	31	6
	BALASORE DISTRICT.											
43	Balasore ...	17,843	157	165	322	18·0	1	1	...	127	22	13
	PURI DISTRICT.											
44	Puri ...	87,568	279	249	528	14·0	32	2	...	457	241	96
	SAMBALPUR DISTRICT.											
45	Sambalpur ...	15,017	188	155	343	22·8	...	56	...	115	44	24
	HAZARIBAGH DISTRICT.											
46	Hazaribagh ...	20,977	205	228	433	20·7	12	...	...	141	4	2
47	Chatra ...	8,758	149	152	301	34·3	38	3	...	75	...	...
48	Giridih ...	21,122	159	160	319	15·1	...	3	...	96	4	2
	RANCHI DISTRICT.											
49	Ranchi ...	50,517	321	261	582	11·5	...	...	...	141	5	7
50	Lohardaga ...	7,577	112	106	218	28·7	...	...	...	58	5	2
	PALAMAU DISTRICT.											
51	Daltonganj ...	12,040	98	93	191	15·8	1	1	...	60	3	2
	MANBHUM DISTRICT.											
52	Parulia ...	25,974	274	232	506	19·5	...	6	...	221	...	2
53	Raghunathpur ...	7,189	94	113	207	28·9	14	13	...	113	...	...
54	Jhalda ...	6,924	96	85	181	26·1	...	...	...	90	...	...
55	Dhanbad ...	16,356	7	4	11	0·7	...	...	...	2	1	...
	SINGHBHUM DISTRICT.											
56	Chaibassa...	10,785	162	146	308	28·5	3	23	...	120	2	3
57	Chakradharpur ...	11,191	70	47	117	10·4	...	...	...	52	...	4
58	Jugsalai ...	8,721	86	65	151	17·4	...	...	...	26	1	1
(a)	Total for all Towns ...	1,401,422	15,137	13,913	29,050	20·7	1,016	316	81	10,740	1,365	765
(a)	Total for the whole Province.	37,667,359	650,033	625,657	1,275,690	33·9	40,940	8,028	5,429	729,315	24,075	6,989

(a) Excluding cantonment population.

districts and towns of the Bihar and Orissa Province, during the year 1931—concl'd.

11						12	13	14										15
Injuries.						All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population.										No.
Suicide.		Wounds or accidents.	Snake-bite or killed by wild animals.	Rabies.	Total.			Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.		
Male.	Female.															For the year.	Mean of previous five years.	
...	...	...	...	...	...	9	60	0·7	0·3	...	2·1	0·1	...	...	0·6	3·8	16·3	36
...	...	2	...	...	2	2	22	...	0·1	...	0·8	0·3	...	0·1	0·1	1·5	9·8	37
...	1	2	...	...	3	4	49	...	0·3	...	4·1	...	...	0·3	0·4	5·2	11·5	38
...	...	...	...	...	...	5	26	0·1	0·2	...	1·9	0·1	...	...	0·6	2·9	10·9	39
1	3	21	3	4	32	251	720	0·9	0·03	...	3·3	1·4	1·0	0·5	3·8	11·0	13·6	40
1	1	1	1	1	5	141	472	1·6	0·07	...	17·9	5·8	0·5	0·4	11·2	37·4	29·5	41
2	1	...	1	...	4	75	268	2·6	...	...	11·6	2·9	0·6	0·4	7·0	25·1	21·1	42
5	4	2	...	...	11	129	304	0·05	0·05	...	7·1	1·2	0·7	0·6	7·2	17·0	20·5	43
1	1	1	2	1	6	339	1,173	0·8	0·05	...	12·2	6·4	2·5	0·2	9·0	31·2	36·2	44
1	...	...	...	...	1	105	345	...	3·7	...	7·7	2·9	1·6	0·07	7·0	23·0	27·8	45
1	1	5	...	...	7	20	186	0·6	...	...	6·7	0·2	0·1	0·3	0·9	8·9	11·4	46
...	...	...	1	...	1	16	133	4·3	0·3	...	8·5	...	...	0·1	1·8	15·2	26·2	47
1	...	2	...	...	3	18	126	...	0·1	...	4·5	0·2	0·1	0·1	0·9	5·9	9·5	48
...	1	10	1	...	12	12	177	...	...	...	2·7	0·09	0·1	0·2	0·2	3·5	8·1	49
...	...	3	...	...	3	32	100	...	...	...	7·6	0·6	0·2	0·4	4·2	13·2	15·6	50
...	...	4	...	...	4	14	85	0·08	0·08	...	5·0	0·2	0·2	0·3	1·2	7·0	9·2	51
...	...	1	...	...	1	16	246	...	0·2	...	8·5	...	0·08	0·04	0·6	9·5	9·5	52
...	...	...	...	...	...	2	142	2·0	1·8	...	15·8	...	...	...	0·3	19·9	25·9	53
...	1	...	...	...	1	9	100	...	...	...	12·9	...	...	0·1	1·3	14·4	14·2	54
...	...	8	...	...	8	2	13	...	...	...	0·1	0·06	...	0·5	0·1	0·8	4·5	55
1	...	4	...	...	5	34	190	0·3	2·1	...	11·1	0·2	0·3	0·5	3·1	17·6	16·2	56
...	...	...	...	...	...	8	64	...	...	...	4·6	...	0·4	...	0·7	5·7	9·7	57
...	...	2	...	...	2	6	36	...	...	...	2·9	0·1	0·1	0·2	0·7	4·1	25·7	58
59	55	358	48	9	529	6,089	20,901	0·7	0·2	0·06	7·7	1·0	0·5	0·4	4·3	14·9	20·7	...
829	1,324	4,275	5,011	167	11,606	176,020	1,002,402	1·1	0·2	0·1	19·3	0·6	0·2	0·3	4·7	26·6	26·5	...

Births and Deaths registered in the cantonment of the

1	2	3	4				5	6	7	8	9	10
No.	Name of cantonment.	Indian non-military population according to Census of 1931.	Births.				Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhoea.	Respiratory diseases.
			Male.	Female.	Total.	Birth-rate.						
1	Dinapur	10,217	170	150	320	31.2	3	...	...	132	10	24

FORM No. VI.

Bihar and Orissa Province, during the year 1931.

11						12	13	14										15
Injuries.						All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population.										No.
Suicide.		Wounds or accidents.	Snake-bite or killed by wild animals.	Rabies.	Total.			Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	All causes.		
Male.	Female.																	
..	..	1	1	..	2	126	297	0·3	..	..	12·9	1·0	2·3	0·2	12·3	29·0		

Annual Form No. VII.—Deaths registered from Cholera in the

1	2	3	4	5								
No.	District.	Circles of registration.		Villages.		January.	February.	March.	April.	May.	June.	July.
		Number in each district.	Number from which deaths from cholera were reported.	Number in each district.	Number from which deaths from cholera were reported.							
PATNA DIVISION.												
1	Patna	19	19	2,315	1,128	8	1	6	17	58	287	753
2	Gaya	16	16	6,058	1,081	5	...	15	165	1,233	771	918
3	Shahabad	17	16	4,735	596	1	...	6	8	79	554	1,019
	Total ...	52	51	13,108	2,805	14	1	27	190	1,370	1,612	2,690
TIRHUT DIVISION.												
4	Saran	13	13	4,305	238	...	...	1	26	50	186	283
5	Champaran	11	8	2,543	70	...	...	4	15	92	83	10
6	Muzaffarpur	14	12	4,059	200	...	1	12	23	22	21	12
7	Darbhanga	14	13	3,135	700	21	...	4	5	25	98	110
	Total ...	52	46	14,047	1,208	21	1	21	69	189	388	415
BHAGALPUR DIVISION.												
8	Monghyr	13	13	2,610	501	3	4	7	35	207	391	268
9	Bhagalpur	14	13	3,080	250	22	11	2	97	231	303	486
10	Purnea	17	7	4,160	99	12	...	...	14	6	11	...
11	Santal Parganas	10	8	10,160	386	...	1	5	6	32	12	81
	Total ...	54	41	20,010	1,236	37	16	14	152	476	717	835
ORISSA DIVISION.												
12	Cuttack	13	13	5,506	990	12	8	157	376	291	674	827
13	Balasore	10	10	3,479	311	3	34	98	64	193	350	266
14	Angul	2	1	1,608	2	...	...	...	3	...	...	...
15	Puri	6	6	2,987	226	1	1	18	168	255	236	93
16	Sambalpur	23	14	1,943	61	...	...	7	35	108	106	72
	Total ...	54	44	15,523	1,590	16	43	280	646	847	1,366	1,258
CHOTA NAGPUR DIVISION.												
17	Hazaribagh	21	16	6,087	155	96	...	17	23	127	260	241
18	Ranchi	32	5	3,838	12	...	...	...	8	7	...	...
19	Palamanu	10	7	3,134	426	...	...	...	...	21	134	74
20	Manbhum	35	29	4,642	150	15	38	41	65	25	59	68
21	Singhbhum	14	3	3,013	5	...	...	3	29	4	...	2
	Total ...	112	60	20,714	748	111	38	61	125	184	453	385
	Total for the Province ...	324	242	83,402	7,587	199	99	403	1,182	3,066	4,536	5,583

DIX I—contd.

districts of Bihar and Orissa Province, during each month of the year 1931.

					6			7			8	9
August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Male.	Female.	Total.	Male.	Female.	Total.		
3,119	565	98	7	3	2,459	2,463	4,922	2.5	2.7	2.7	2.6	1
2,264	1,391	280	193	11	3,719	3,527	7,246	3.1	2.9	3.0	2.9	2
1,162	658	185	82	27	1,920	1,861	3,781	1.9	1.9	1.9	2.6	3
6,545	2,614	563	282	41	8,093	7,851	15,949	2.6	2.5	2.6	2.7	
668	555	209	32	7	965	1,052	2,017	0.8	0.8	0.8	1.6	4
182	155	59	...	13	325	288	613	0.3	0.3	0.3	2.9	5
43	68	25	36	1	142	122	264	0.1	0.08	0.09	4.7	6
200	188	93	168	66	536	442	978	0.3	0.3	0.3	4.7	7
1,093	966	386	236	87	1,963	1,904	3,872	0.4	0.3	0.4	3.6	
1,701	1,044	288	135	10	2,049	2,044	4,093	1.8	1.8	1.8	3.4	8
1,172	898	244	315	152	2,067	1,836	3,933	1.8	1.7	1.8	2.9	9
3	...	6	135	226	225	188	413	0.2	0.2	0.2	2.0	10
588	417	100	44	85	690	681	1,371	0.6	0.6	0.6	0.6	11
3,464	2,359	688	629	473	5,031	4,779	9,810	1.1	1.1	1.1	2.3	
1,093	566	571	434	282	2,513	2,778	5,291	2.4	2.4	2.4	2.1	12
526	236	39	51	140	883	1,117	2,000	1.8	2.2	2.0	2.1	13
...	...	...	...	...	3	...	3	0.02	...	0.01	0.005	14
153	114	29	7	25	587	513	1,100	1.2	0.9	1.1	2.3	15
20	11	...	...	...	165	194	359	0.4	0.4	0.4	0.6	16
1,702	927	639	492	447	4,151	4,602	8,753	1.6	1.7	1.6	1.9	
134	527	86	1	21	770	763	1,533	1.0	1.0	1.0	1.3	17
...	...	...	12	19	15	31	46	0.02	0.04	0.03	0.2	18
91	97	42	25	...	252	232	484	0.6	0.6	0.6	1.9	19
88	36	18	1	1	240	215	455	0.3	0.2	0.3	0.5	20
...	...	3	...	...	20	21	41	0.04	0.04	0.04	0.1	21
313	660	149	39	41	1,297	1,262	2,559	0.4	0.4	0.4	0.7	
13,207	7,526	2,375	1,678	1,089	20,545	20,398	40,943	1.1	1.0	1.1	2.4	

Annual Form No. VIII.—Deaths registered from small-pox in the

1	2	3	4	5							
No.	District.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.
		Number in each district.	Number from which deaths from small-pox were reported.	Number in each district.	Number from which deaths from small-pox were reported.						
PATNA DIVISION.											
1	Patna	19	18	2,315	132	27	26	29	59	43	34
2	Gaya	16	15	6,058	279	61	90	109	83	96	120
3	Shahabad	17	17	4,735	323	56	35	84	111	176	159
	Total	52	50	13,108	734	144	151	222	253	315	313
TIRHUT DIVISION.											
4	Saran	13	11	4,305	223	28	44	30	81	93	115
5	Champaran	11	10	2,548	78	...	1	2	28	48	56
6	Muzaffarpur	14	10	4,059	238	3	1	16	28	54	27
7	Darbhanga	14	12	3,135	120	2	7	35	27	28	37
	Total	52	43	14,047	659	33	53	83	164	223	235
BHAGALPUR DIVISION.											
8	Monghyr	13	13	2,610	162	22	32	60	96	57	67
9	Bhagalpur	14	11	3,080	37	5	1	8	13	44	18
10	Purnea	17	7	4,160	40	6	6	7	50	1	5
11	Santal Parganas	10	10	10,160	93	68	67	114	93	77	104
	Total	54	41	20,010	332	101	106	189	252	179	194
ORISSA DIVISION.											
12	Cuttack	13	12	5,506	416	146	164	225	153	98	95
13	Balasore	10	9	3,479	121	20	30	47	33	23	20
14	Angul	2	...	1,608	...	...	...	...	...	...	...
15	Puri	6	5	2,987	74	5	17	14	19	12	17
16	Sambalpur	23	21	1,943	245	78	91	114	160	164	135
	Total	54	47	15,523	856	249	302	400	365	297	267
CHOTA NAGPUR DIVISION.											
17	Hazaribagh	21	17	6,087	62	10	4	3	26	19	24
18	Ranchi	32	12	3,838	18	5	3	...	12	9	13
19	Palamau	10	8	3,134	45	11	22	20	24	33	26
20	Manbhum	35	23	4,642	90	11	22	13	26	27	16
21	Singbhum	14	8	3,013	10	16	8	8	32	28	37
	Total	112	68	20,714	225	53	59	64	120	116	126
	Total for the Province	324	249	83,402	2,806	580	671	958	1,154	1,130	1,135

DIX I—contd.

districts of Bihar and Orissa Province, during each month of the year 1931.

						6			7		8			9	10
July.	August.	September.	October.	November.	December.	Total.			Number of deaths among children.		Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
						Male.	Female.	Total.	Under 1 year.	One year and under 10 years.	Male.	Female.	Total.		
17	57	34	5	2	20	177	176	353	35	78	0·2	0·2	0·2	0·8	1
67	62	18	17	22	20	408	357	765	88	154	0·3	0·3	0·3	0·9	2
108	61	8	4	14	33	422	427	849	9	18	0·4	0·4	0·4	0·7	3
192	180	60	26	38	73	1,007	960	1,967	132	250	0·3	0·3	0·3	0·8	
167	29	13	4	15	22	323	318	641	64	67	0·3	0·2	0·2	0·3	4
32	8	...	3	...	6	104	80	184	2	5	0·09	0·08	0·08	0·3	5
11	2	2	1	6	7	89	69	158	50	55	0·06	0·05	0·05	0·3	6
14	21	36	9	17	107	194	146	340	68	43	0·1	0·09	0·1	0·2	7
224	60	51	17	38	142	710	613	1,323	184	170	0·1	0·1	0·1	0·3	
30	26	23	16	5	7	232	209	441	37	47	0·2	0·2	0·2	0·3	8
15	15	...	3	..	5	71	56	127	...	...	0·07	0·05	0·06	0·5	9
4	...	3	5	...	12	51	48	99	...	...	0·04	0·04	0·05	0·5	10
60	24	52	28	8	7	418	284	702	14	6	0·4	0·3	0·3	0·6	11
109	65	78	52	13	31	772	597	1,369	51	53	0·2	0·1	0·1	0·5	
66	59	108	14	11	65	597	607	1,204	110	371	0·6	0·5	0·5	1·1	12
7	3	5	1	1	3	95	98	193	9	6	0·2	0·2	0·2	1·1	13
...	...	...	...	...	...	...	...	...	...	...	...	...	...	0·03	14
6	16	6	2	3	18	66	69	135	1	19	0·1	0·1	0·1	1·7	15
121	90	36	50	16	59	566	548	1,114	42	38	1·5	1·2	1·3	0·4	16
200	168	155	67	31	145	1,324	1,522	2,646	162	434	0·5	0·5	0·5	1·1	
23	25	14	...	...	4	92	70	162	8	16	0·1	0·1	0·1	0·5	17
14	10	1	2	...	1	44	26	70	1	3	0·06	0·03	0·04	0·4	18
16	9	6	6	5	7	98	87	185	...	1	0·2	0·2	0·2	0·8	19
5	9	1	...	...	...	72	58	130	19	11	0·07	0·06	0·07	0·2	20
11	6	1	..	...	9	101	75	176	3	1	0·2	0·2	0·2	0·2	21
69	59	23	8	5	21	407	316	723	31	32	0·1	0·1	0·1	0·4	
794	532	367	170	125	412	4,220	3,808	8,028	560	939	0·2	0·2	0·2	0·6	

Annual Form No. IX.—Deaths registered from Fevers in the district

1	2	3	4	5									
No.	District.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.	July.	
		Number in each district.	Number from which deaths from fevers were reported.	Number in each district.	Number from which deaths from fevers were reported.								
PATNA DIVISION.													
1	Patna	19	19	2,315	2,315	1,092	958	1,650	1,426	1,968	3,660	2,751	
2	Gaya	16	16	6,058	6,058	2,645	1,901	2,521	3,391	4,131	5,639	5,381	
3	Shahabad	17	17	4,735	4,735	1,979	1,499	2,028	2,302	2,817	4,589	4,507	
	Total	52	52	13,108	13,108	5,716	4,358	6,199	7,119	8,916	13,888	12,639	
TIRHUT DIVISION.													
4	Saran	13	13	4,305	4,280	2,299	1,838	2,218	2,882	3,218	4,366	4,548	
5	Champanan	11	11	2,548	2,548	3,036	2,204	2,975	2,667	3,732	3,743	3,095	
6	Muzaffarpur	14	14	4,059	4,059	4,744	3,337	4,842	5,578	6,377	6,683	5,609	
7	Darbhanga	14	14	3,135	3,135	4,390	3,774	5,443	5,684	6,489	6,777	5,321	
	Total	52	52	14,047	14,022	14,469	11,153	15,485	16,811	19,816	21,569	18,573	
BHAGALPUR DIVISION.													
8	Monghyr	13	13	2,610	2,610	2,554	2,064	2,848	3,302	3,598	4,251	3,660	
9	Bhagalpur	14	14	3,080	3,080	3,313	2,163	3,025	2,505	3,125	3,373	2,661	
10	Purnea	17	17	4,160	4,160	3,474	2,499	3,547	3,379	2,796	3,112	2,451	
11	Santal Parganas	10	10	10,160	8,453	2,342	1,998	2,368	2,383	2,517	2,672	2,262	
	Total	54	54	20,010	18,303	11,683	8,634	11,785	11,569	12,036	13,408	11,034	
ORISSA DIVISION.													
12	Cuttack	13	13	5,500	5,506	2,934	2,576	2,962	2,628	2,223	2,842	2,438	
13	Balasore	10	10	3,479	3,479	1,519	1,246	1,606	1,188	1,051	1,331	1,550	
14	Angul	2	2	1,608	1,095	389	336	370	454	445	389	414	
15	Puri	6	6	2,987	2,987	750	757	959	897	783	986	912	
16	Sambalpur	23	23	1,943	1,868	561	504	741	890	939	1,027	1,022	
	Total	54	54	15,523	14,935	6,153	5,419	6,638	6,057	5,441	6,575	6,336	
CHOTA NAGPUR DIVISION.													
17	Hazaribagh	21	21	6,087	6,087	1,976	1,431	1,619	1,815	2,378	2,710	2,446	
18	Ranchi	32	32	3,833	3,747	1,683	1,481	1,960	1,928	2,141	2,858	2,013	
19	Palamau	10	10	3,134	3,134	1,375	1,034	1,151	1,504	1,682	2,046	2,044	
20	Manbhum	35	35	4,642	4,642	1,660	1,724	2,167	2,290	2,432	2,434	2,275	
21	Singhbhum	14	14	3,013	1,556	786	903	1,035	931	844	829	958	
	Total	112	112	20,714	19,196	7,483	6,629	7,932	8,468	9,477	10,877	9,736	
	Total for the Province	324	324	83,402	79,564	45,504	36,193	48,042	50,024	55,686	66,317	58,318	

DIX I—contd.

of Bihar and Orissa Province, during each month of the year 1931.

					6			7			8	1
August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Male.	Female.	Total.	Male.	Female.	Total.		
6,253	4,689	3,150	2,533	2,044	15,970	16,204	32,174	16·7	18·2	17·4	13·9	1
7,691	9,090	6,195	4,744	3,745	29,288	27,786	57,074	24·5	23·2	23·9	19·9	2
5,218	5,914	4,377	3,847	2,968	20,836	21,209	42,045	20·9	21·3	21·1	19·0	3
19,162	19,693	13,722	11,124	8,757	66,094	65,199	131,293	21·0	21·2	21·0	17·9	
5,558	5,434	4,102	3,038	2,979	23,202	19,278	42,480	19·0	15·2	17·1	12·8	4
4,362	5,202	4,486	4,225	4,028	23,636	20,179	43,815	21·8	18·9	20·4	17·8	5
7,311	7,648	7,658	6,794	6,719	38,788	34,519	73,307	26·9	23·1	24·9	20·4	6
7,187	7,368	7,910	6,859	6,059	39,517	33,744	73,261	25·2	21·2	23·1	18·8	7
24,418	25,712	24,156	20,916	19,785	125,143	107,720	232,863	23·5	19·9	21·7	17·7	
5,928	6,928	5,994	5,541	3,929	26,005	24,592	50,597	22·6	21·5	22·1	19·1	8
3,908	4,730	4,790	4,905	4,229	22,688	20,039	42,727	20·1	18·1	19·1	18·9	9
2,999	3,713	3,419	3,665	4,292	21,181	18,075	39,256	18·7	17·1	17·9	20·6	10
3,861	4,114	2,965	2,997	2,676	17,402	15,753	33,155	16·9	15·3	16·2	16·5	11
16,696	19,485	17,168	17,108	15,126	87,276	78,459	165,735	19·7	18·1	18·9	18·9	
3,691	3,731	2,491	2,946	3,198	16,333	18,327	34,660	15·9	15·9	15·9	13·8	12
1,958	1,956	1,564	2,070	2,292	9,259	10,072	19,331	19·3	19·7	19·5	16·9	13
681	680	449	399	445	2,733	2,718	5,451	25·0	23·8	24·4	25·0	14
1,341	1,202	797	1,153	1,338	5,565	6,310	11,875	11·1	11·8	11·5	8·8	15
2,216	1,523	1,325	1,272	1,142	6,419	6,743	13,162	14·9	15·0	14·8	12·3	16
9,887	9,092	6,626	7,840	8,415	40,309	44,170	84,479	15·8	16·0	15·9	13·6	
2,579	3,220	2,241	2,006	2,197	13,829	12,789	26,618	18·4	16·7	17·5	19·6	17
3,390	3,906	3,203	2,611	2,351	15,487	14,041	29,528	19·9	17·8	18·8	17·9	18
2,052	2,544	1,898	1,903	1,622	10,757	10,148	20,905	26·2	24·8	25·5	22·9	19
2,634	2,659	2,106	1,839	1,911	14,305	12,026	26,331	15·2	13·8	14·5	14·5	20
1,134	1,140	1,018	989	1,122	6,147	5,548	11,695	13·1	12·0	12·6	13·8	21
11,989	13,469	10,466	9,348	9,203	60,525	54,552	115,077	18·0	16·5	17·3	17·5	
82,152	87,451	72,138	66,326	61,286	379,347	350,100	729,447	20·2	18·5	19·4	17·3	

Annual Form No. X.—Deaths registered from Dysentery and Diarrhœa in the

1	2	3		4		5							
No.	District.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.	July.	August.
		Number in each district.	Number from which deaths from Dysentery and Diarrhoea were reported.	Number in each district.	Number from which deaths from Dysentery and Diarrhoea were reported.								
PATNA DIVISION.													
1	Patna	19	19	2,315	859	56	43	73	77	75	109	111	353
2	Gaya	16	15	6,058	126	3	5	4	41	24	15	19	82
3	Shahabad	17	12	4,735	85	8	1	2	5	1	3	5	13
	Total	52	46	13,108	1,070	67	49	79	123	100	127	135	448
TIRHUT DIVISION.													
4	Saran	13	13	4,305	620	45	73	70	95	57	103	99	131
5	Champanan	11	3	2,548	4	...	...	4	2	1	15	...	...
6	Muzaffarpur	14	11	4,059	128	7	9	11	10	32	12	10	21
7	Darbhanga	14	9	3,135	30	11	4	22	15	14	10	36	26
	Total	52	36	14,047	782	63	86	107	122	104	140	145	178
BHAGALPUR DIVISION.													
8	Monghyr	13	13	2,610	203	7	12	20	17	17	9	14	25
9	Bhagalpur	14	11	3,080	43	4	2	4	3	3	3	9	9
10	Purnea	17	12	4,160	24	10	4	1	2	2	12	4	3
11	Santal Parganas	10	9	10,160	57	12	8	20	14	17	11	23	45
	Total	54	45	20,010	324	33	26	45	36	39	35	50	82
ORISSA DIVISION.													
12	Cuttack	13	13	5,506	3,365	733	603	1,008	696	706	997	925	1,544
13	Balasore	10	10	3,479	321	47	59	45	53	40	57	53	65
14	Angul	2	2	1,608	50	3	3	1	3	19	5	5	4
15	Puri	6	6	2,987	2,158	268	274	310	249	341	466	430	591
16	Sambalpur	23	23	1,943	957	99	89	118	131	168	243	243	454
	Total	54	54	15,523	6,851	1,150	1,028	1,482	1,132	1,274	1,768	1,656	2,658
CHOTA NAGPUR DIVISION.													
17	Hazaribagh	21	14	6,087	22	15	2	11	6	4	8	3	11
18	Ranchi	32	29	3,838	429	25	19	36	29	26	41	40	145
19	Palamanu	10	5	3,134	15	...	1	...	1	1	...	...	3
20	Manbhum	35	23	4,642	35	2	6	10	6	6	9	5	14
21	Singhbhum	14	9	3,013	12	...	4	3	3	1	2	4	1
	Total	112	80	20,714	3	42	32	60	45	38	60	52	174
Total for the Province		324	261	83,402	9,540	1,355	1,221	1,773	1,458	1,555	2,130	2,038	3,540

DIX I—*contd.**Districts of Bihar and Orissa Province, during each month of the year 1931.*

				6			7			8	1
September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
				Male.	Female.	Total.	Male.	Female.	Total.		
316	204	141	111	886	783	1,669	0·9	0·8	0·9	0·8	1
48	71	7	13	196	136	332	0·2	0·1	0·1	0·1	2
12	3	5	3	30	31	61	0·03	0·03	0·03	0·03	3
376	278	153	127	1,112	950	2,062	0·3	0·3	0·3	0·3	
196	135	63	96	641	522	1,163	0·5	0·4	0·5	0·3	4
...	...	1	1	19	5	24	0·02	0·004	0·01	0·009	5
16	8	14	11	96	65	161	0·07	0·04	0·03	0·09	6
12	11	9	18	120	68	188	0·07	0·04	0·06	0·06	7
224	154	87	126	876	660	1,536	0·2	0·1	0·1	0·1	
32	64	20	10	135	112	247	0·1	0·09	0·1	0·08	8
15	3	8	36	48	51	99	0·04	0·05	0·04	0·05	9
1	...	1	7	26	31	47	0·02	0·02	0·02	0·05	10
29	32	9	19	133	106	239	0·1	0·1	0·1	0·09	11
77	99	38	72	342	290	632	0·08	0·07	0·07	0·07	
1,473	847	894	929	5,919	5,436	11,355	5·7	4·7	5·2	4·3	12
66	37	35	50	321	286	607	0·7	0·6	0·6	0·5	13
9	1	...	2	27	28	55	0·2	0·2	0·2	0·4	14
671	305	357	357	2,387	2,232	4,619	4·7	4·2	4·5	4·4	15
379	249	165	133	1,407	1,064	2,471	3·3	2·4	2·8	2·3	16
2,598	1,439	1,451	1,471	10,061	9,046	19,107	3·9	3·3	3·0	3·1	
3	3	6	1	50	23	73	0·1	0·03	0·05	0·1	17
86	50	37	24	319	239	558	0·4	0·3	0·3	0·5	18
8	4	...	2	14	6	20	0·03	0·01	0·02	0·07	19
7	2	4	...	40	31	71	0·04	0·03	0·04	0·06	20
5	2	1	...	17	9	26	0·03	0·02	0·03	0·05	21
109	61	48	27	440	308	748	0·1	0·09	0·1	0·2	
3,384	2,031	1,777	1,823	12,831	11,254	24,085	0·7	0·6	0·6	0·6	

Annual Form No. XI.—Deaths registered from Respiratory diseases in the

1	2	3	4	5								
No.	District.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.	July.
		Number in each district.	Number from which deaths from Respiratory diseases were reported.	Number in each district.	Number from which deaths from Respiratory diseases were reported.							
PATNA DIVISION.												
1	Patna	19	19	2,315	570	149	121	118	72	101	111	1
2	Gaya	16	14	6,058	83	4	9	4	15	15	13	4
3	Shahabad	17	11	4,735	84	2	1	3	1	...	3	6
	Total	52	44	13,108	737	155	131	125	88	116	127	90
TIRHUT DIVISION.												
4	Saran	13	13	4,305	403	65	39	58	47	66	68	73
5	Champanan	11	2	2,548	2	...	2	...	...	...	1	1
6	Muzaffarpur	14	11	4,059	81	13	10	5	12	2	11	6
7	Darbhanga	14	10	3,135	12	6	5	4	7	3	1	4
	Total	52	36	14,047	498	84	56	67	66	71	81	84
BHAGALPUR DIVISION.												
8	Monghyr	13	10	2,610	50	4	5	6	4	3	7	4
9	Bhagalpur	14	11	3,080	37	3	2	4	8	1	6	6
10	Purnea	17	6	4,160	10	7	2	2	2	2	1	2
11	Santal Parganas	10	6	10,160	182	17	13	20	15	25	37	24
	Total	54	33	20,010	279	31	22	32	29	31	51	36
ORISSA DIVISION.												
12	Cutiack	13	13	5,506	888	127	105	135	103	85	112	129
13	Balasore	10	10	3,471	38	9	9	6	7	4	7	9
14	Angul	2	2	1,608	5	1	1	...	1	1	2	...
15	Puri	6	6	2,987	924	104	106	113	72	88	115	128
16	Sambalpur	23	23	1,943	707	85	64	101	94	113	102	118
	Total	54	54	15,523	2,562	326	285	355	277	291	338	384
CHOTA NAGPUR DIVISION.												
17	Hazaribagh	21	10	6,087	13	3	2	...	2	1	1	...
18	Ranchi	32	21	3,838	25	8	6	5	4	8	3	8
19	Palamanu	10	3	3,134	3	...	2	...	...	2	...	...
20	Manbhum	35	24	4,642	36	13	8	5	8	6	8	4
21	Singhbhum	14	4	3,013	9	3	1	...	3	1	...	2
	Total	112	62	20,714	86	27	19	10	17	18	12	14
	Total for the Province	324	229	83,402	4,162	623	513	589	477	527	609	608

DJX I—contd.

districts of Bihar and Orissa Province, during each month of the year 1931.

					6			7			8	1
August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Male.	Female.	Total.	Male.	Female.	Total.		
195	126	80	102	108	701	662	1,363	0·7	0·7	0·7	0·7	1
13	4	19	5	11	72	44	116	0·06	0·04	0·05	0·06	2
4	5	3	1	6	22	13	35	0·02	0·01	0·01	0·02	3
212	135	102	108	125	795	719	1,514	0·2	0·2	0·2	0·2	
92	79	66	43	51	413	334	747	0·3	0·3	0·3	0·3	4
...	1	...	1	...	4	2	6	0·004	0·002	0·003	0·007	5
10	11	11	13	10	69	45	114	0·05	0·03	0·04	0·04	6
6	1	1	3	5	25	21	46	0·02	0·01	0·01	0·01	7
108	92	78	60	66	511	402	913	0·1	0·07	0·08	0·08	
12	6	2	5	17	46	29	75	0·04	0·02	0·03	0·03	8
3	5	1	9	10	39	19	58	0·03	0·02	0·02	0·03	9
...	...	2	1	4	21	4	25	0·02	0·004	0·01	0·01	10
27	23	18	19	16	166	88	254	0·2	0·08	0·1	0·01	11
42	34	23	34	47	272	140	412	0·06	0·03	0·05	0·04	
147	119	88	93	107	745	605	1,350	0·7	0·5	0·6	0·6	12
9	2	4	6	9	49	32	81	0·1	0·06	0·08	0·06	13
6	2	1	...	...	8	7	15	0·07	0·06	0·06	0·08	14
174	122	91	107	129	698	651	1,349	1·4	1·2	1·3	1·5	15
163	87	76	93	86	728	454	1,182	1·7	1·0	1·3	1·3	16
499	332	260	299	331	2,228	1,749	3,977	0·9	0·6	0·7	0·7	
1	2	1	14	1	21	7	28	0·02	0·01	0·02	0·03	17
4	6	11	4	3	46	24	70	0·06	0·03	0·04	0·06	18
...	...	...	...	...	2	2	4	0·004	0·004	0·004	0·008	19
7	3	9	5	3	61	18	79	0·06	0·02	0·04	0·07	20
...	1	4	1	...	12	4	16	0·02	0·01	0·02	0·03	21
12	12	25	24	7	142	55	197	0·04	0·02	0·03	0·04	
873	605	488	525	576	3,948	3,065	7,013	0·2	0·2	0·2	0·2	

Annual Form No. XII.—Deaths registered from Plague in the

1	2	3	4	5								
No.	District.	Circles of Registration.		Villages.		January.	February.	March.	April.	May.	June.	July.
		Number in each district.	Number from which deaths from Plague were reported.	Number in each district.	Number from which deaths from Plague were reported.							
PATNA DIVISION.												
1	Patna	19	2	2,315	60	14	14	...	39	...	...	...
2	Gaya	16	1	6,058	3	...	22	31	13	...	...	...
3	Shahabad	17	1	4,735	1	...	...	...	...	...	1	...
Total		52	4	13,108	64	14	36	31	52	...	1	...
TIRHUT DIVISION.												
4	Saran	13	10	4,305	119	164	190	499	318	28	3	1
5	Champanar	11	...	2,548	...	...	...	...	...	...	...	...
6	Muzaffarpur	14	7	4,059	441	141	279	675	390	46	4	16
7	Darbhanga	14	7	3,135	190	137	268	412	198	84	20	...
Total		52	24	14,047	750	442	737	1,586	906	158	27	17
BHAGALPUR DIVISION.												
8	Monghyr	13	5	2,610	20	150	235	460	224	20	...	...
9	Bhagalpur	14	...	3,080	...	...	...	...	...	...	...	...
10	Purnea	17	...	4,160	...	...	...	...	...	...	...	...
11	Santal Parganas	10	...	10,160	...	...	...	...	...	...	...	...
Total		54	5	20,010	20	150	235	460	224	20	...	...
ORISSA DIVISION.												
12	Cuttack	13	...	5,506	...	...	...	...	...	...	...	...
13	Balasore	10	...	3,479	...	...	...	...	...	...	...	...
14	Angul	2	...	1,608	...	...	...	...	...	...	...	...
15	Puri	6	...	2,987	...	...	...	...	...	...	...	...
16	Sambalpur	23	...	1,943	...	...	...	...	...	...	...	...
Total		54	...	15,523	...	...	...	...	...	...	...	...
CHOTA NAGPUR DIVISION.												
17	Hazaribagh	21	...	6,087	...	...	...	...	...	...	...	...
18	Ranchi	32	...	3,838	...	...	...	...	...	...	...	...
19	Palamau	10	...	3,134	...	...	...	...	...	...	...	...
20	Manbhum	35	...	4,642	...	...	...	...	...	...	...	...
21	Singhbhum	13	...	3,013	...	...	...	...	...	...	...	...
Total		112	...	20,714	...	...	...	...	...	...	...	...
Total for the Province		324	33	83,402	834	606	1,008	2,077	1,182	178	28	17

DIX I—concl'd.

districts of Bihar and Orissu Province, during each month of the year 1931.

					6			7			8	1
August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Male.	Female.	Total.	Male.	Female.	Total.		
...	...	...	...	...	22	45	67	0.02	0.05	0.04	0.05	1
...	...	...	...	...	25	41	66	0.02	0.03	0.03	0.09	2
...	...	...	...	...	...	1	1	...	0.001	0.0035	0.1	3
...	...	...	...	...	47	87	134	0.01	0.03	0.02	0.09	
...	6	..	8	70	549	738	1,287	0.4	0.6	0.5	0.5	4
...	...	...	..	...	...	...	...	...	...	...	0.04	5
...	9	1	31	105	654	1,043	1,697	0.5	0.7	0.6	0.8	6
...	...	...	7	52	475	703	1,178	0.3	0.4	0.4	0.8	7
...	15	1	46	227	1,678	2,484	4,162	0.3	0.4	0.4	0.6	
1	2	...	11	30	528	605	1,133	0.5	0.5	0.5	0.3	8
...	...	...	...	...	...	...	...	...	...	...	...	9
...	...	...	...	...	...	...	...	...	...	...	...	10
...	...	...	...	...	...	...	...	...	...	...	...	11
1	2	..	11	30	528	605	1,133	0.1	0.1	0.1	0.08	
...	...	...	...	...	...	...	...	...	...	...	...	12
...	...	...	...	...	...	...	...	...	...	...	...	13
...	...	...	...	...	...	...	...	...	...	...	...	14
...	...	...	...	...	...	...	...	...	...	...	...	15
...	...	...	...	...	...	...	...	...	...	...	...	16
...	
...	
...	...	...	...	...	...	...	...	...	...	...	...	17
...	...	...	...	...	...	...	...	...	...	...	0.001	18
...	...	...	...	...	...	...	...	...	...	...	...	19
...	...	...	...	...	...	...	...	...	...	...	...	20
...	...	...	...	...	...	...	...	...	...	...	...	21
...	...	...	...	...	...	...	...	...	...	...	0.0002	
1	17	1	57	257	2,253	3,176	5,429	0.1	0.2	0.1	0.2	

APPENDIX II.

PROVINCIAL.

Statement showing details of registration in areas in which it is compulsory.

Compulsory registration area.	Population according to Census of 1931.	Probable number of births at the rate of 286 per 1,000 married women between the ages of 15 and 40.	Actual number of births registered during the year.	Probable birth-rate per mille (columns 2 and 3).	Registered birth-rate per mille during the year.	Number of deaths registered during the year.		Death-rate per mille.		Number of persons prosecuted under Act IV (B. C.) of 1873.	Number of persons convicted.
						Including deaths in dispensary.	Excluding deaths in dispensary.	Including deaths in dispensary.	Excluding deaths in dispensary.		
1	2	3	4	5	6	7	8	9	10	11	12
1. Patna City ...	159,690	Not available.	2,805	Not available.	17.5	2,066	1,541	13.9	9.6	...	...
2. Bihar ...	46,994		824		17.5	553	530	11.7	11.3	...	...
3. Dinapore Nizamat ...	24,321		598		24.7	412	395	17.0	16.3	9	8
4. Barh ...	9,750		263		26.0	218	194	22.3	19.9	...	...
5. Khagole ...	7,412		133		17.9	134	134	18.1	18.1	...	...
6. Gaya ...	88,005		1,552		21.0	2,659	2,422	30.2	27.5	10	10
7. Tikari ...	5,481		212		38.7	160	160	29.2	29.2	...	...
8. Daudnagar ...	11,699		383		32.7	210	209	17.9	17.8	...	...
9. Arrah ...	48,922		663		13.5	294	214	6.0	4.4	...	...
10. Buxar ...	13,449		370		27.5	137	113	10.2	8.4	16	...
11. Dumraon ...	14,421		222		15.4	58	58	4.0	4.0	10	...
12. Jagdispur ...	9,661		313		32.4	99	99	10.2	10.2	...	...
13. Sasaram ...	25,175		735		29.2	306	282	12.2	11.2	6	3
14. Bhabua ...	6,002		132		22.0	93	85	15.5	14.2	...	...
15. Chapra ...	47,448		1,206		25.4	936	814	19.7	17.1	42	2
16. Revelganj ...	8,812		413		46.8	289	289	32.8	32.8	18	...
17. Siwan ...	14,215		692		48.7	283	253	19.9	17.8	166	96
18. Bettiah ...	27,941		434		15.5	165	63	5.9	2.2	6	6
19. Motihari ...	17,545		366		20.9	161	84	9.2	4.8	...	...
20. Muzaffarpur ...	43,049		1,141		26.5	731	726	16.9	16.8	1	1
21. Sitamarhi ...	10,701		284		26.5	205	172	19.2	16.0	...	...
22. Hajipur ...	19,299		609		31.6	456	439	23.6	22.7	36	36
23. Lalganj ...	9,192		307		33.4	236	236	25.6	25.6	...	...
24. Darbhanga ...	60,676		2,103		34.7	1,324	1,126	21.8	18.5	15	15
25. Roserah ...	8,869		222		25.0	197	196	22.2	22.1	...	...
26. Samastipur ...	9,891		208		21.0	140	118	14.2	11.9	...	...
27. Madhubani ...	18,789		456		24.3	270	239	14.4	12.7	...	...
28. Monghyr ...	52,863		1,449		27.4	931	917	17.6	17.3	...	...
29. Jamalpur ...	30,346		1,013		33.4	674	653	22.2	21.5	...	...
30. Bhagalpur ...	83,847		1,278		15.2	916	758	10.9	9.0	...	...
31. Colgong ...	5,233		150		28.7	116	116	22.2	22.2	...	...
32. Purnea ...	15,474		231		14.9	229	124	14.3	8.0	7	...
33. Kishanganj ...	8,946		132		14.7	75	28	8.4	3.1	...	...
34. Katihar ...	15,864		174		10.9	60	43	3.8	2.7	...	...
35. Forbesganj ...	5,939		190		32.0	71	71	11.9	11.9	...	...
36. Sahibganj ...	15,863		137		8.6	60	55	3.8	3.5	...	...
37. Deoghar ...	14,217		26		1.8	22	...	1.5	...	10	10
38. Damka ...	9,471		93		9.8	49	...	5.2	...	...	...
39. Madhupur ...	8,965		41		4.6	26	21	2.9	2.3	...	...
40. Cuttack ...	65,263		982		15.0	720	533	11.0	8.2	...	...
41. Kendrapara ...	12,620		314		24.8	472	458	37.4	36.3	2	...
42. Jajpur ...	10,673		177		16.6	268	253	25.1	23.7	1	...
43. Balasore ...	17,843		322		18.0	304	249	17.0	13.9	...	...
44. Puri ...	37,568		528		14.0	1,173	968	31.2	25.8	...	...
45. Sambalpur ...	15,017		343		22.8	345	310	23.0	20.6	...	...
46. Hazaribagh ...	20,977		433		20.7	186	156	8.9	7.4	...	...
47. Chatra ...	8,758		301		34.3	133	116	15.2	13.2	...	...
48. Giridih ...	21,122		319		15.1	126	105	5.9	5.0	11	11
49. Ranchi ...	50,517		582		11.5	177	55	3.5	1.1	4	...
50. Lohardaga ...	7,577		218		28.7	100	94	13.2	12.4	...	...
51. Daltonganj ...	12,040		191		15.8	85	28	7.0	2.3	3	...
52. Purulia ...	25,974		506		19.5	246	178	9.5	6.8	16	16
53. Raghunathpur ...	7,139		207		28.9	143	142	19.9	19.9	...	...
54. Jhaldah ...	6,924		181		26.1	100	99	14.4	14.3	...	...
55. Dhanbad ...	16,356		11		0.7	13	...	0.8	...	...	...
56. Chaibassa ...	10,785		308		28.5	190	161	17.6	14.9	17	15
57. Chakradharpur ...	11,191		117		10.4	64	62	5.7	5.6	5	5
58. Jugsalai ...	8,721		151		17.3	36	36	4.1	4.1	15	15
(a) Total ...	1,401,422		29,050		20.7	20,901	17,980	14.9	12.8	426	249

(a) Excluding cantonment population.

APPENDIX III.
JHARIA MINING AREA.
STATISTICS OF EPIDEMIC DISEASES.

1931.

Month.			Total births.	Total deaths.	Influenza.		Cholera.		Small-pox.		Plague.	
					Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1			2	3	4	5	6	7	8	9	10	11
January ...	...	...	161	87	28	...	2	1	23	2	...	...
February ...	...	...	138	98	85	5	5	2	45	...	...	...
March ...	...	...	177	118	202	2	27	7	38	3	...	...
April ...	...	...	167	115	152	2	12	5	22	1	...	...
May ...	...	...	139	94	79	1	5	3	16	...	...	...
June ...	...	...	150	101	231	2	7	...	4	...	...	...
July ...	...	...	190	117	1,170	7	10	2	2	...	...	...
August ...	...	...	202	128	707	8	20	5	2	...	...	...
September ...	...	...	196	117	316	4	6	4	...	...	...	...
October ...	...	...	167	86	149	4	6	1	...	...	...	...
November ...	...	...	174	81	81	2	...	...	...	...	...	...
December ...	...	...	153	63	28	1	...	...	11	6	...	...
Total ...	...	...	2,008	1,205	3,228	38	100	30	163	6	...	..
Ratio per Mille ...	...	...	15.9	9.6	25.6	0.3	0.8	0.2	1.3	0.05	...	...

N.B.—The figures relate to the labour population only and the ratios are calculated accordingly.

STATEMENT NO. I.—Showing particulars of Vaccination in the

Number.	District.		Population of district according to the census of 1931.	Average population per square mile.	Average number of vaccinators employed throughout the season.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary						
						Male.	Female.	Total.		Total.						
1	2		3	4	5	6			7	8						
1	Patna	... { By paid Vaccinators { By licensed Vaccinators ...	1,846,474	893	{ 15 70	7,811	4,838	12,679	845	8,028						
						19,854	17,781	37,635	538	36,686						
						2	Gaya	... { By paid Vaccinators { By licensed Vaccinators ...	2,388,463	506	{ 12 84	4,266	3,478	7,744	645	6,983
												27,701	25,867	53,568	638	53,212
												3	Shahabad	... { By paid Vaccinators { By licensed Vaccinators ...	1,993,489	456	{ 15 96	5,392	3,697	9,089	606	7,091
23,680	16,256	41,936	436	41,276												
	Total of Patna Division	{ By paid Vaccinators { By licensed Vaccinators ...	6,238,425	558	{ 42 250	17,469	12,043	29,512	702	22,102						
						71,235	61,904	133,139	532	131,174						
Tirhut Division.																
4	Saran	... { By paid Vaccinators { By licensed Vaccinators ...	2,436,468	927	{ 11 84	6,226	4,890	11,116	1,010	5,876						
						36,524	35,241	71,765	854	71,638						
5	Champaran	... { By paid Vaccinators { By licensed Vaccinators ...	2,145,687	607	{ 8 67	6,131	2,953	9,084	1,136	1,945						
						19,753	18,632	38,385	572	38,173						
6	Muzaffarpur	... { By paid Vaccinators { By licensed Vaccinators ...	2,941,025	968	{ 11 79	7,632	3,328	10,960	996	2,515						
						45,102	42,617	87,719	1,110	87,175						
7	Darbhanga	... { By paid Vaccinators { By licensed Vaccinators ...	3,166,094	945	{ 11 88	3,239	1,949	5,188	471	2,507						
						49,875	49,833	99,708	1,133	97,921						
	Total of Tirhut Division	{ By paid Vaccinators { By licensed Vaccinators ...	10,739,274	852	{ 41 318	23,228	13,120	36,348	886	12,843						
						151,254	146,323	297,577	932	294,907						
Bhagalpur Division.																
8	Monghyr	... { By paid Vaccinators { By licensed Vaccinators ...	2,287,154	582	{ 8 61	2,622	1,082	3,704	463	1,567						
						34,034	31,616	65,650	1,076	63,794						
9	Bhagalpur	... { By paid Vaccinators { By licensed Vaccinators ...	2,234,632	528	{ 13 63	9,324	3,669	12,993	999	2,551						
						33,831	32,565	66,396	1,053	66,355						
10	Purnea	... { By paid Vaccinators { By licensed Vaccinators ...	2,186,543	439	{ 13 57	6,666	3,867	10,533	810	3,117						
						18,493	17,858	37,351	656	36,749						
11	Santal Parganas	... { By paid Vaccinators { By licensed Vaccinators ...	2,051,472	375	{ 10 55	7,605	4,888	12,493	1,249	6,382						
						27,293	25,484	52,777	959	51,104						
	Total of Bhagalpur Division.	{ By paid Vaccinators { By licensed Vaccinators ...	8,759,801	471	{ 44 236	26,217	13,506	39,723	903	13,617						
						114,656	107,553	222,209	941	218,002						
Orissa Division.																
12	Cuttack	... { By paid Vaccinators { By licensed Vaccinators ...	2,176,707	595	{ 18 73	4,021	1,906	5,927	228	2,263						
						30,901	26,504	57,405	786	56,240						
13	Balasore	... { By paid Vaccinators { By licensed Vaccinators ...	990,600	482	{ 4 37	3,303	1,208	4,410	1,102	964						
						21,735	17,787	39,522	1,068	32,541						
14	Angul	... { By paid Vaccinators { By licensed Vaccinators ...	222,736	132	{ ... 11	...	...	...	...	...	
						4,836	4,372	9,208	837	7,980						
15	Puri	... { By paid Vaccinators { By licensed Vaccinators ...	1,035,154	415	{ 29 4	26,629	21,219	47,848	1,650	44,620						
						2,103	1,116	3,219	805	332						
16	Sambalpur	... { By paid Vaccinators { By licensed Vaccinators ...	880,945	230	{ 4 34	2,103	1,116	3,219	805	332						
						13,612	11,691	25,303	744	21,891						
	Total of Orissa Division	{ By paid Vaccinators { By licensed Vaccinators ...	5,306,142	887	{ 55 155	35,955	25,449	61,404	1,116	48,179						
						71,084	60,354	131,438	848	118,652						

District of Bihar and Orissa during the year 1931-32.

Vaccination.				Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during previous five years.		Average annual number of deaths from small-pox during previous five years.					
Successful.				Total.	Successful.	Unknown.	Primary.	Re-vaccination.		Primary.	Re-vaccination.	Number.	Ratio per 1,000 of population.	Number.	Ratio per 1,000 of population.				
Under one year.	One year and under six years.	Total of all ages.	Unknown.																
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1,933	5,423	7,595	144	4,651	1,736	554	96·61	42·37	26·19	1·89	11·91	61,014	38·76	1,243	0·79				
3,126	32,023	36,646	8	949	467	71	99·91	53·19		0·02	7·48								
2,574	4,181	6,961	8	761	528	31	99·80	72·33		0·11	4·07					64,442	29·93	1,951	0·90
8,472	43,132	53,082	47	356	293	20	99·84	99·84		0·09	5·61								
3,225	2,985	7,052	17	1,993	1,431	38	99·08	73·01		0·24	0·19									52,456	23·83	1,358	0·69
14,959	21,818	41,264	...	630	531	2	99·97	80·70	...	0·30									
7,732	12,589	21,608	169	7,410	3,695	623	98·51	54·44	25·30	0·76	8·41	177,912	32·08	4,452	0·80				
26,557	96,978	130,992	55	1,965	1,291	93	99·90	68·96		0·04	4·73								
1,838	2,607	5,662	42	5,240	3,411	390	97·05	77·33	32·43	0·71	7·44	83,970	35·88	844	0·36				
19,077	45,849	71,184	101	127	71	26	99·51	70·29		0·14	20·47								
427	1,352	1,827	81	7,139	3,138	2,206	98·01	63·61	20·44	4·16	30·39	48,701	25·09	600	0·31				
8,236	29,346	38,131	24	212	102	51	99·92	63·35		0·06	25·15								
420	2,031	2,495	4	8,445	1,997	3,655	99·39	41·69	31·32	0·15	43·27	98,051	35·59	789	0·28				
9,007	77,380	86,903	42	544	236	85	99·74	51·42		0·05	15·62								
936	1,536	2,497	...	2,681	1,231	398	99·60	53·92	32·47	...	14·89	104,350	35·81	636	0·22				
28,373	69,435	97,860	9	1,787	689	90	99·93	40·60		0·009	5·00								
3,621	7,526	12,481	127	23,505	9,777	6,649	98·15	58·00	29·56	0·99	28·29	335,072	33·68	2,869	0·29				
64,693	222,010	294,078	176	2,670	1,098	352	99·78	45·41		0·06	9·44								
783	752	1,535	3	2,137	129	1,434	99·14	18·35	28·85	0·19	67·10	72,119	35·52	1,207	0·59				
23,333	40,305	63,775	6	1,856	561	276	99·97	35·51		0·009	14·87								
753	1,782	2,549	...	10,442	5,828	1,443	99·02	64·76	34·15	...	13·82	74,666	36·71	1,009	0·50				
30,122	36,067	66,335	2	41	27	...	99·97	65·85		0·003	...								
1,059	1,686	2,866	154	7,416	2,643	2,179	96·72	50·47	19·67	4·94	29·38	47,325	23·37	1,008	0·50				
12,241	24,063	36,661	5	637	323	176	99·77	70·06		0·01	27·62								
3,037	3,189	6,279	87	6,111	2,478	1,903	99·74	58·88	30·05	1·36	31·14	61,852	34·40	1,076	0·60				
26,960	23,878	50,914	115	1,673	725	369	99·85	55·59		0·22	22·05								
5,622	7,419	13,229	244	26,106	11,078	6,959	98·93	57·86	27·81	1·79	26·65	255,992	32·45	4,300	0·54				
92,686	124,313	217,685	128	4,207	1,636	821	99·91	48·31		0·06	19·51								
622	1,405	2,150	75	3,664	1,177	1,578	98·26	56·42	27·64	3·31	43·06	47,575	23·04	1,926	0·93				
23,063	31,587	56,114	70	1,165	481	234	99·90	54·60		0·12	24·37								
275	658	961	3	3,446	2,012	356	100·00	65·11	40·02	0·31	10·33	39,483	40·27	897	0·91				
5,495	25,521	32,427	79	6,981	4,248	998	99·89	71·02		0·24	14·30								
...				
4,248	3,652	7,908	11	1,228	946	22	99·23	78·44	39·75	0·14	1·79	13,236	72·49	6	0·03				
11,184	29,271	43,998	535	3,228	1,645	907	99·80	70·87	44·41	1·19	28·09	46,305	48·65	796	0·84				
145	141	319	13	2,887	973	1,511	100·00	70·71	30·28	3·92	53·34	21,296	26·97	331	0·42				
15,633	6,055	21,841	39	3,412	3,125	213	99·95	97·69		0·17	6·24								
12,226	31,475	47,428	626	13,225	5,807	4,352	99·74	65·44	33·98	1·30	32·90	167,895	33·79	3,956	0·80				
48,439	66,815	118,290	199	12,786	8,800	1,517	99·86	78·09		0·18	11·87								

STATEMENT NO. I.—Showing particulars of Vaccination in the

Number.	District.	Population of district according to the census of 1931.	Average population per square mile.	Average number of vaccinators employed throughout the season.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary
					Male.	Female.	Total.		Total.
1	2	3	4	5	6			7	8
Chota Nagpur Division.									
17	Hazaribagh ...	By paid Vaccinators ...	1,517,357	216	39	26,759	24,561	51,320	48,986
18	Ranchi	By paid Vaccinators ...	1,567,149	220	9	5,758	3,800	9,558	2,194
		By licensed Vaccinators ...			45	25,105	23,492	48,597	47,834
19	Palamau ...	By paid Vaccinators ...	818,736	166	6	3,076	1,738	4,814	1,474
		By licensed Vaccinators ...			25	13,791	11,367	25,158	23,543
20	Manbhum ...	By paid Vaccinators ...	1,810,890	442	28	15,630	11,881	27,511	16,306
		By licensed Vaccinators ...			41	18,416	17,585	36,001	35,525
21	Singhbhum ...	By paid Vaccinators ...	929,802	239	5	1,751	761	2,512	997
		By licensed Vaccinators ...			25	11,421	10,617	22,038	21,761
Total of Chota Nagpur Division.			6,643,934	235	87	52,974	42,741	95,715	69,957
					136	68,733	63,061	131,794	128,663
Total of Vaccine Department.			37,677,576	453	269	155,843	106,859	262,702	166,698
					1,095	476,962	439,195	916,157	891,398
					1,364	632,805	546,054	1,178,859	1,058,096
Total Collieries			...	...	...	2,050	761	2,811	809
Dispensaries and Leper Asylum			...	...	...	51	37	88	66
Total Cooly Department			...	...	...	1,910	556	2,466	35
Total Jails and Cantonments			...	...	...	21,612	792	22,404	534
Grand Total			...	...	...	658,428	548,200	1,206,628	1,059,540

districts of Bihar and Orissa during the year 1931-32—concl'd.

Vaccination.				Revaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases.		Average annual number of persons successfully vaccinated during previous five years.		Average annual number of deaths from small-pox during previous five years.	
Successful.				Total.	Successful.	Unknown.	Primary.	Revaccination.		Primary.	Re-vaccination.	Number.	Ratio per 1,000 of population.	Number.	Ratio per 1,000 of population.
Under one year.	One year and under six years.	Total of all ages.	Unknown.												
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
20,041	28,419	48,782	74	2,334	1,064	575	99.73	60.47	33.96	0.15	24.63	46,534	36.44	594	0.46
1,793	352	2,194	...	7,364	4,004	1,637	100.00	69.91	35.04	...	22.23	59,639	44.69	476	0.36
36,681	10,719	47,834	...	763	414	150	100.00	67.54		...	19.66				
445	749	1,275	188	3,340	45	3,279	99.14	73.77	37.35	12.75	98.17	22,689	30.94	593	0.80
14,240	8,151	23,397	48	1,615	1,019	371	99.15	81.91		0.20	22.97				
3,443	11,357	14,921	473	11,205	4,202	2,089	94.24	46.09	30.53	2.90	20.43	64,347	41.55	257	0.16
13,489	21,927	35,524	...	476	240	37	99.99	53.45		...	5.67				
562	404	976	3	1,515	628	163	98.19	46.45	25.28	0.30	10.76	23,521	30.97	133	0.16
13,885	7,635	21,687	27	277	216	15	99.78	82.44		0.12	5.42				
26,284	41,281	68,148	738	25,758	9,943	7,742	98.45	55.19	31.35	1.05	30.06	216,730	38.34	2,042	0.36
78,295	43,432	128,342	75	3,131	1,889	563	99.81	73.56		0.06	17.98				
55,495	100,220	162,894	1,904	96,004	40,300	26,326	98.85	57.84	29.39	1.14	27.42	1,153,601	23.92	17,619	0.52
310,670	558,548	889,387	633	24,759	14,714	3,246	99.84	68.39		0.07	13.11				
366,165	658,838	1,052,281	2,537	120,763	55,014	29,572	99.69	60.34		0.24	24.49				
287	337	753	2	2,002	770	156	94.48	38.88	...	0.24	1.09	...	...	...	...
28	28	56	4	22	6	7	90.31	40.00	...	6.06	31.81	...	...	...	...
...	...	...	35	2,431	...	2,431	...	...	...	100.00	100.00	...	..	...	...
246	124	525	3	21,870	10,229	2,467	98.87	52.72	...	0.56	11.28	...	...	...	...
366,706	659,327	1,053,615	2,581	147,088	66,019	34,633	99.68	58.70	29.72	0.24	23.54	...	...	...	...

SUMMARY.

	Total number of persons vaccinated.		Total number of operations performed.		Percentage of successful cases in which the results were known.		Average number of persons vaccinated by each vaccinator.		Number of children successfully vaccinated.		Ratio of successful vaccinations per 1,000 of population.	Total cost of Department.	Average cost of each successful case.
	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Vaccinators employed.	Persons vaccinated by each vaccinator.	Under one year.	One and under 6 years.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
BY SPECIAL STAFF.													
Statement (I) ...	1,058,096	120,763	1,058,096	120,763	99.69	60.34	1,364	864	366,165	658,838	29.72	Rs. a. 1,60,622 6 6	0 2 3
BY OTHER AGENCIES.													
Collieries, Dispensaries and Lerer Asylum, Cooly Depôt, Jails and Cantonments.	1,444	26,325	1,444	26,325	95.29	51.75	...	...	541	489			
Total ...	1,059,540	147,088	1,059,540	147,088	99.68	58.70	1,364	864	366,706	659,327	29.72	1,60,622 6 6	0 2

APPENDIX II.

STATEMENT NO. II.—Showing the cost of vaccination in the

No.	Circle and district.	Native supervising officer.	Expen								
			Pay.	Paid vaccinators.	Pay.	Licensed vaccinators.	Pay.	Clerks.	Pay.	Peons, etc.	Pay.
1	2	3	4	5	6	7	8	9	10	11	12
	PATNA DIVISION.		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.		Rs. a. p.
1	Patna	5	2,864 9 10	15	1,208 0 0	70	...	...	...	1	120 0 0
2	Gaya	5	2,368 0 0	12	2,488 12 0	84	...	...	...	...	...
3	Shahabad	5	2,377 11 0	15	1,475 3 0	96	...	...	...	...	...
	Total of Patna Division	15	7,610 4 10	42	5,171 15 0	250	...	...	...	1	120 0 0
	TIRHUT DIVISION.										
4	Saran	4	2,199 0 0	11	1,179 0 0	84	...	...	...	...	...
5	Champaran	3	1,525 0 0	8	955 0 0	67	...	...	...	...	...
6	Muzaffarpur	4	1,973 1 0	11	1,464 0 0	79	...	...	...	...	...
7	Darbhanga	4	2,079 0 0	11	1,219 15 0	88	...	...	...	...	...
	Total of Tirhut Division	15	7,776 1 0	41	4,817 15 0	318	...	...	...	...	...
	BHAGALPUR DIVISION.										
8	Monghyr	4	1,930 12 9	8	696 0 0	61	...	...	...	1	96 0 0
9	Bhagalpur	5	3,400 0 0	13	1,570 13 0	63	...	...	...	...	...
10	Purnea	4	2,019 11 0	13	3,146 14 0	57	...	...	...	...	...
11	Santal Parganas	6	3,005 0 0	10	2,147 5 0	55	...	...	...	...	...
	Total of Bhagalpur Division	19	10,346 7 9	44	7,561 0 0	236	...	...	...	1	96 0 0
	ORISSA DIVISION.										
12	Cuttack	4	2,100 0 0	18	1,920 1 6	73	...	...	...	...	...
13	Balasore	3	1,560 0 0	4	492 7 0	37	...	...	...	...	...
14	Angul	2	1,281 1 0	...	...	11	...	...	...	...	...
15	Puri	3	1,647 0 0	29	3,783 12 0	...	...	...	...	...	...
16	Sambalpur	3	1,485 0 0	4	635 14 0	34	...	...	...	...	...
	Total of Orissa Division	15	8,073 1 0	55	6,742 2 6	155	...	...	...	...	...
	CHOTA NAGPUR DIVISION.										
17	Hazaribagh	4	2,485 2 0	39	6,066 8 6	...	...	...	...	...	...
18	Ranchi	5	2,442 0 0	9	1,222 6 0	45	...	...	...	...	...
19	Palamau	3	1,546 0 0	6	805 4 0	25	...	...	...	...	...
20	Manbhum	3	1,666 0 0	28	3,477 4 0	41	...	...	...	...	...
21	Singhbhum	3	1,487 14 0	5	962 8 0	25	...	...	...	...	...
	Total of Chota Nagpur Division	18	9,627 0 0	87	12,533 14 6	136	...	...	...	...	...
	Total of Vaccine Circle	82	43,432 14 7	269	36,826 15 0	1,095	...	...	...	2	216 0 0
	ESTABLISHMENT OF THE ASSISTANT DIRECTORS OF PUBLIC HEALTH, NORTH BIHAR CIRCLE.	1	5,700 0 0	...	...	...	...	2	1,240 11 0	2	236 1 0
	DITTO, SOUTH BIHAR CIRCLE	1	7,057 8 0	...	...	...	...	2	1,240 8 0	2	239 0 0
	DITTO, ORISSA CIRCLE	1	8,099 1 0	...	...	...	...	2	1,240 8 0	2	218 11 0
	CHOTA NAGPUR CIRCLE	1	13,990 0 0	...	...	...	...	2	1,414 14 0	2	240 0 0
	Total	4	34,846 9 0	...	...	...	...	8	5,136 9 0	8	933 12 0
	Total of Province ... ..	...	78,279 7 7	...	36,826 15 0	...	...	8	5,136 9 0	10	1,149 13 0

Province of Bihar and Orissa during the year 1931-32.

diture.					Paid from—						Number of all successful vacci- nations and revaccinations.	Average cost of each successful case.
Total pay of establish- ment.	Travelling allowance.	Contingencies.		Total cost.	Imperial Fund.	Provincial Fund.	Local Fund.	Municipalities.	Native States.	Total.		
		Cost of lymph.	Other contin- gencies.									
13	14	15	16	17	18	19	20	21	22	23	24	25
Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.		Rs. a. p.
4,192 9 10	2,937 13 0	...	284 9 2	7,415 0 0	...	4,261 6 10	1,084 9 2	2,069 0 0	...	7,415 0 0	48,358	0 2 5
4,856 12 0	1,594 1 0	...	188 8 0	6,639 5 0	...	4,112 1 0	1,775 15 0	751 5 0	...	6,639 5 0	62,022	0 1 9
3,852 14 0	1,826 10 0	...	262 12 0	5,942 4 0	...	4,374 5 0	577 10 0	990 5 0	...	5,942 4 0	50,467	0 1 10
12,902 3 10	6,358 8 0	...	735 13 2	19,996 9 0	...	12,747 12 10	3,438 2 2	3,810 10 0	...	19,996 9 0	160,847	0 2 0
3,378 0 0	1,387 9 0	...	273 13 0	5,639 6 0	...	3,563 8 0	625 14 0	850 0 0	...	5,639 6 0	80,635	0 1 0
2,430 0 0	1,058 10 0	...	169 6 0	3,646 0 0	...	2,691 0 0	642 0 0	313 0 0	...	3,646 0 0	43,859	0 1 4
3,437 1 0	1,354 13 0	...	295 11 0	5,087 9 0	...	2,858 11 0	1,089 10 0	1,139 4 0	...	5,987 9 0	92,279	0 0 11
3,293 15 0	1,025 4 0	...	200 12 0	4,524 15 0	...	3,194 4 0	445 15 0	884 12 0	...	4,524 15 0	102,819	0 0 8
12,594 0 0	4,824 4 0	...	879 10 0	18,297 14 0	...	12,307 7 0	2,803 7 0	3,187 0 0	...	18,297 14 0	319,592	0 0 11
2,722 12 9	1,299 7 0	...	212 8 3	4,234 12 0	...	3,320 2 9	...	914 9 3	...	4,234 12 0	66,000	0 1 0
4,970 13 0	352 5 0	...	178 0 0	5,501 2 0	...	3,842 5 0	906 3 0	662 10 0	...	5,501 2 0	76,315	0 1 1
5,157 9 0	1,744 3 0	...	431 7 0	7,336 3 0	...	3,548 6 0	2,607 4 0	1,180 9 0	...	7,336 3 0	43,016	0 2 8
5,152 5 0	2,462 4 0	...	132 8 0	7,747 1 0	...	5,597 4 0	1,278 8 0	871 5 0	...	7,747 1 0	61,662	0 2 0
18,003 7 9	5,858 3 0	...	957 7 3	24,819 2 0	...	16,308 1 9	4,881 15 0	3,629 1 3	...	24,819 2 0	246,993	0 1 7
4,020 1 6	1,195 3 0	...	131 15 0	5,347 3 6	...	3,427 2 0	1,181 8 0	738 9 6	...	5,347 3 6	60,158	0 1 5
1,962 7 0	822 6 0	...	70 0 0	2,854 13 0	...	2,602 13 0	...	252 0 0	...	2,854 13 0	39,648	0 1 2
1,231 1 0	750 15 0	...	78 12 0	2,110 12 0	...	2,110 12 0	...	...	...	2,110 12 0	8,854	0 3 10
5,430 12 0	989 14 0	...	120 0 0	6,540 10 0	...	2,756 14 0	3,585 0 0	198 12 0	...	6,540 10 0	45,970	0 2 3
2,120 14 0	1,147 1 6	...	109 11 6	3,377 11 0	...	2,596 12 0	572 5 0	208 10 0	...	3,377 11 0	26,672	0 2 0
14,815 3 6	4,905 7 6	...	510 6 6	20,231 1 6	...	13,494 5 0	5,338 13 0	1,397 15 6	...	20,231 1 6	181,302	0 1 9
8,551 10 6	1,297 15 0	...	89 15 0	9,939 8 6	...	3,873 0 0	5,493 2 9	573 5 9	...	9,939 8 6	51,533	0 3 1
3,634 6 0	1,097 9 0	...	112 0 0	5,473 15 0	...	4,453 15 0	353 0 0	667 0 0	...	5,473 15 0	54,966	0 1 7
2,351 4 0	725 15 0	...	74 0 0	3,151 3 0	...	2,324 1 0	582 0 0	245 2 0	...	3,151 3 0	25,667	0 2 0
5,143 4 0	538 15 0	...	139 11 9	5,821 14 9	...	2,480 1 0	2,705 8 0	636 5 9	...	5,821 14 9	55,287	0 1 8
2,450 6 0	396 7 0	...	72 1 0	2,918 14 0	...	1,944 5 0	162 8 0	812 1 0	...	2,918 14 0	23,567	0 1 7
22,160 14 6	4,656 13 0	...	487 11 9	27,305 7 3	...	15,075 6 0	9,296 2 9	2,933 14 6	...	27,305 7 3	210,900	0 2 1
80,475 13 7	26,603 3 6	...	3,571 0 8	1,10,650 1 9	...	69,933 0 7	25,758 7 11	14,958 9 3	...	1,10,650 1 9	1,119,634	0 1 7
7,176 12 0	1,708 8 0	...	885 0 0	9,770 4 0	...	9,770 4 0	...	...	...	9,770 4 0	...	...
8,537 0 0	1,135 9 0	...	802 2 9	10,474 11 9	...	10,474 11 9	...	...	...	10,474 11 9	...	...
9,558 4 0	1,692 2 0	...	314 15 0	11,565 5 0	...	11,565 5 0	...	...	...	11,565 5 0	...	...
15,644 14 0	2,193 9 0	...	323 9 0	18,162 0 0	...	18,162 0 0	...	...	...	18,162 0 0	...	...
40,916 14 0	6,729 12 0	...	2,325 10 9	49,972 4 9	...	49,972 4 9	...	...	...	49,972 4 9	...	...
1,21,392 11 7	33,332 15 6	...	5,896 11 5	1,60,622 6 6	...	1,19,905 5 4	25,758 7 11	14,958 9 3	...	1,60,622 6 6	...	0 2 3

Comparative statement no. III—Showing the percentage of persons primarily vaccinated to the total number of vaccinations performed in the Province of Bihar and Orissa in each of the undermentioned official years.

Establishments.	Years.									
	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.
1	2	3	4	5	6	7	8	9	10	11
Government staff ...	...	..	...	...	14'17	25'46	14'13	7'36	9'56	9'99
Dispensaries ...	...	0'29	...	...	...	29'76	...	14'75	9'45	75'00
Municipal ...	83'77	83'90	72'96	49'40	49'70	62'34	73'47	71'71	64'03	67'13
District Board ...	84'54	76'06	80'42	60'52	55'95	52'10	60'14	67'12	70'70	64'30
Licensed vaccinators ..	99'50	99'40	98'62	92'11	93'02	96'21	97'60	97'59	93'75	97'29
Rails and collieries ...	...	98'97	94'28	26'13	31'91	29'82	34'22	35'25	34'23	28'78
Jails ...	4'07	8'63	4'36	3'88	1'75	1'09	1'49	1'34	1'11	0'78
Cooly Depot ...	34'01	5'70	3'22	2'81	3'69	1'26	2'31	0'51	0'45	1'43
Cantonment ...	94'15	96'60	92'73	84'47	51'71	36'49	...	93'08	89'21	94'03

STATEMENT No. IV.

STATEMENT NO. IV.--Showing particulars of vaccination

District.	Total number of persons vaccinated.		Total number inspected—								Percentage of	
			By Assistant Directors of Public Health or Superintendent of Vaccination.				By Native Superintendents or other Inspecting Officers.				By Assistant Director or Superintendent	
			Assistant Directors of Public Health.		Superintendent of vaccination.		District Inspectors.		Sub-Inspectors.		Assistant Directors of Public Health.	
	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.
1	2	3	4	5	6	7	8	9	10	11	12	13
Patna ...	45,076	8,179	3,080	...	4,060	2	3,461	...	12,121	74	6.83	...
Gaya ...	60,196	2,824	3,460	...	...	...	4,066	14	8,659	10	5.75	...
Shahabad ...	48,386	4,071	2,834	...	1,114	8	8,423	12	14,322	1,043	5.86	...
Saran ...	77,514	6,103	6,466	...	10,015	...	13,470	...	26,713	...	8.34	...
Champaran ...	40,123	8,538	791	...	...	...	6,468	12	14,393	12	1.98	...
Muzaffarpur ...	89,819	10,259	11,523	...	6,295	1,167	14,956	135	33,210	449	12.83	...
Darbhanga ...	1,00,456	5,152	2,606	...	...	...	7,407	151	35,535	...	2.59	...
Monghyr ...	65,361	3,993	6,424	...	1,025	...	9,447	...	17,297	...	9.83	...
Bhagalpur ...	68,906	13,913	4,136	...	434	...	4,838	...	15,144	...	6.00	...
Purnea ...	30,886	9,287	...	...	640	...	1,951	147	5,545	75	...	...
Santal Parganas ...	57,718	10,739	11,427	...	2,735	937	3,875	...	15,836	270	19.73	...
Cuttack ...	58,503	5,817	1,615	...	305	739	5,205	...	10,546	...	2.76	...
Balasore ...	33,505	10,427	1,447	...	25	...	3,024	825	8,140	860	4.32	...
Angul ...	7,930	2,157	1,345	...	1,279	359	4,119	128	1,794	130	16.85	...
Puri ...	44,620	4,088	2,947	...	1,442	1,103	11,295	925	19,065	1,495	6.60	...
Sambalpur ...	23,228	7,279	927	...	2,004	41	4,186	263	10,465	499	4.17	...
Hazaribagh ...	49,614	4,123	4,218	...	1,125	1	3,363	...	10,185	58	8.50	...
Ranchi ...	50,028	9,114	3,511	...	...	...	10,429	...	23,742	...	7.02	...
Palaman ...	25,052	5,061	3,182	...	1,467	53	3,337	237	6,351	125	12.70	...
Manbhum ...	51,831	13,270	2,587	...	1,451	1,887	4,180	...	3,429	3	4.99	...
Singbhum ...	22,758	1,792	1,844	...	782	95	4,512	7	7,107	31	8.10	...
TOTAL ...	10,59,540	147,088	76,373	...	36,228	5,942	132,043	2,856	299,608	5,134	7.21	...

verified by Inspecting Officers during the year 1931-32.

Inspection to total number vaccinated.						Percentage of cases found successful to total number inspected.								Percentage of successful case reported by vaccinators.	
Inspectors of Public Health of Vaccination.		By Native Superintendents or other Inspecting Officers.				By Assistant Directors of Public Health or Superintendent of Vaccination.				By Native Superintendents or other Inspecting Officers.					
Superintendent of Vaccination.		District Inspectors.		Sub-Inspectors.		Assistant Directors of Public Health.		Superintendent of Vaccination.		District Inspectors.		Sub-Inspectors.			
Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.		
14	15	16	17	18	19	20	21	22	23	24	25	26	27		28	29
9.45	0.02	7.67	...	26.93	0.90	98.76	...	99.40	100.00	99.27	...	99.10	50.00	99.00	45.81
...	...	6.75	0.49	14.38	0.35	98.35	...	...	...	100.00	71.43	99.23	...	99.83	77.02
2.30	0.19	17.41	0.29	29.59	25.62	97.70	...	99.82	100.00	99.67	100.00	94.61	100.00	99.99	73.89
12.92	...	17.39	...	34.46	...	92.00	...	99.41	...	99.32	...	99.53	...	99.32	68.22
...	...	16.12	0.14	35.87	0.14	99.37	...	...	...	94.35	50.00	92.36	50.00	99.60	45.63
7.01	11.38	16.65	1.31	36.97	4.38	99.00	...	99.92	44.47	92.82	35.56	99.55	38.97	99.67	26.83
...	...	7.37	2.93	35.37	...	98.35	...	...	...	97.95	61.59	99.75	...	99.92	12.21
1.56	...	14.45	...	26.46	...	99.64	...	100.00	...	99.93	...	99.90	...	99.93	30.22
0.67	...	7.02	...	21.97	...	89.77	...	99.35	...	99.83	...	99.64	...	99.98	53.41
1.60	...	4.89	1.58	13.90	0.80	...	...	100.00	...	100.00	100.00	100.00	100.00	99.14	27.56
4.73	9.19	6.71	...	27.43	2.51	94.95	...	98.61	68.08	99.51	...	99.34	72.22	99.49	39.45
0.52	12.70	8.90	...	18.03	...	93.10	...	100.00	31.94	99.12	...	97.26	...	99.59	32.55
0.07	...	9.03	7.91	24.32	8.24	90.04	...	100.00	...	97.35	89.58	97.98	81.86	99.65	60.04
16.03	16.64	51.62	5.93	23.48	6.02	97.39	...	99.53	26.21	87.33	42.97	55.69	...	99.69	77.25
3.19	26.98	25.31	28.65	42.72	36.57	95.14	...	98.75	42.88	98.96	44.97	98.87	51.50	98.56	48.12
9.02	0.56	18.83	3.61	42.13	6.86	90.61	...	98.50	100.00	71.81	100.00	66.10	100.00	99.72	61.92
2.26	0.02	6.82	...	20.53	1.40	99.54	...	100.00	100.00	98.10	...	97.09	89.65	99.16	55.6
...	...	20.84	...	47.46	...	97.63	...	...	...	100.00	...	100.00	...	...	...
5.85	0.89	14.91	3.97	25.35	2.09	99.52	...	99.45	83.02	98.89	77.63	96.12	80.00	98.84	16.36
2.80	10.45	8.07	...	6.61	0.03	98.76	...	99.93	28.84	99.64	...	99.83	...	99.99	84.89
3.44	5.30	19.83	0.39	31.28	1.73	96.14	...	100.00	82.10	98.78	85.71	99.37	85.87	99.58	47.19
3.42	4.04	12.46	1.94	28.28	3.49	96.55	...	99.47	43.82	97.88	69.29	94.36	64.12	99.50	47.21

STATEMENT NO. 7.—Showing side by side the ratios per mille of population

District.	1922-23.		1923-24.		1924-25.		1925-26.	
	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.
1	2	3	4	5	6	7	8	9
Patna ...	0.05	39.70	0.06	39.12	0.13	41.63	0.49	45.73
Gaya ...	0.04	21.67	0.04	23.75	0.01	25.34	0.46	29.72
Shahabad ...	0.04	32.35	0.02	32.85	0.10	22.24	0.16	31.15
Saran ...	0.02	28.57	0.05	30.96	0.14	32.84	0.50	34.76
Champaran ...	0.06	22.92	0.09	23.23	0.38	23.19	0.65	26.24
Muzaffarpur ...	0.04	31.26	0.12	33.42	0.21	33.22	0.24	35.23
Darbhanga ...	0.06	30.26	0.05	32.14	0.15	31.11	0.12	34.67
Monghyr ...	0.11	31.03	0.09	34.89	0.12	30.21	0.11	35.18
Bhagalpur ...	0.09	31.12	0.48	32.18	0.46	32.57	0.13	36.64
Purnea ...	0.24	1.95	0.06	17.39	0.04	2.67	0.17	24.06
Santal Parganas ...	0.01	30.62	0.03	31.16	0.06	33.82	0.17	34.66
Cuttack ...	0.15	29.90	0.28	22.29	0.77	21.96	2.50	30.39
Balasore ...	0.17	24.01	0.37	30.79	0.34	25.88	1.71	36.12
Angul ...	0.005	30.18	...	33.73	...	33.78	...	109.19
Puri ...	0.13	36.99	0.25	38.33	1.21	38.75	7.21	64.43
Sambalpur ...	0.006	24.08	0.01	30.09	0.12	27.21	0.60	27.71
Hazaribagh ...	0.02	25.04	0.03	28.02	0.05	28.38	0.34	34.75
Ranchi ...	0.05	31.33	0.01	33.58	0.02	36.98	0.34	43.01
Palamau ...	0.09	21.25	0.04	22.45	0.01	26.92	0.06	28.92
Manbhum ...	0.02	33.85	0.01	37.46	0.02	32.73	0.32	46.18
Singhbhum ...	0.18	22.38	0.14	21.14	0.36	29.64	0.52	33.75
Total ...	0.07	28.80	0.11	29.91	0.24	29.72	0.67	35.33

of deaths from small-pox and the ratios of successful vaccinations per mille of population during the ten years ending 1931-32.

1926-27.		1927-28.		1928-29.		1929-30.		1930-31.		1931-32.	
Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.
10	11	12	13	14	15	16	17	18	19	20	21
1.69	60.52	1.07	45.78	0.49	33.32	0.40	28.34	0.23	25.86	0.30	26.19
2.21	31.69	1.21	25.92	0.30	27.20	0.27	30.24	0.56	30.79	0.29	25.96
0.99	40.83	1.60	31.64	0.37	24.90	0.16	23.68	0.32	23.65	0.53	25.31
0.50	52.75	0.75	36.49	0.19	36.99	0.19	41.23	0.17	33.68	0.34	32.43
0.98	29.89	0.34	23.24	0.07	23.84	0.10	24.51	0.06	20.98	0.12	20.44
0.36	36.37	0.56	37.26	0.18	35.52	0.25	36.18	0.06	34.63	0.06	31.32
0.27	35.85	0.34	39.22	0.16	36.36	0.12	37.63	0.18	35.51	0.17	32.47
0.62	37.92	0.93	36.65	0.53	38.29	0.45	35.86	0.42	30.35	0.16	28.85
0.65	38.90	1.13	40.63	0.45	38.32	0.16	35.17	0.08	34.53	0.07	34.15
0.69	25.45	0.25	25.03	0.65	23.77	0.18	22.20	0.08	21.38	0.05	19.67
0.90	37.47	1.06	36.28	0.46	34.28	0.20	31.32	0.36	34.28	0.25	30.05
2.92	21.99	0.95	26.65	0.18	20.00	0.09	23.20	0.50	19.61	0.44	27.64
2.34	43.48	1.42	28.22	0.43	36.65	0.09	44.98	0.29	40.12	0.13	40.02
0.06	95.66	0.08	90.45	0.03	61.65	...	49.20	...	46.76	...	39.75
3.54	48.92	0.47	48.59	0.08	39.80	0.02	44.86	0.06	45.27	0.26	44.41
0.68	26.31	0.27	25.21	0.22	26.66	0.17	24.82	0.76	29.37	1.40	30.28
1.00	35.97	0.73	38.77	0.30	38.74	0.15	35.92	0.13	36.81	0.10	33.96
1.02	45.63	0.39	43.34	0.24	40.73	0.08	40.80	0.04	55.24	0.05	35.04
0.28	30.84	1.01	30.57	1.35	30.66	0.95	30.67	0.43	33.58	0.23	37.35
0.42	48.32	0.17	45.66	0.06	38.51	0.05	35.79	0.13	38.93	0.05	30.53
0.16	29.44	0.13	28.59	0.12	27.58	0.11	29.46	0.27	35.62	0.14	25.28
1.05	36.71	0.79	35.10	0.31	32.72	0.19	32.81	0.24	32.05	0.23	29.72

STATEMENT NO. VI.--Showing the protection afforded to infants in each town in the Provinces of Bihar and Orissa during the year 1931-32.

District.	Towns.	Number of births during the year ending 31st March 1932.	Number of deaths amongst infants under one year during the year ending 31st March 1932.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1932.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Patna	Patna	2,663	384	1,135	1st October 1884.
	Bihar	720	110	256	1st April 1887.
	Dinapur	884	200	493	28th January 1891.
	Barh	232	48	49	1st April 1887.
	Khagole	103	31	35	12th July 1910.
	Total	4,607	773	1,968	
Gaya	Gaya	1,843	548	1,210	1st January 1883.
	Tikari	206	41	92	3rd January 1891.
	Daudnagar	388	70	185	Ditto.
	Total	2,436	659	1,487	
Shahabad	Arrah	648	82	902	20th July 1885.
	Buxar	382	47	203	1st April 1887.
	Dumraon	249	22	74	Ditto.
	Jagadispur	271	38	297	20th December 1890.
	Sassaram	698	64	677	1st April 1887.
	Bhabhua	136	25	146	Ditto.
	Total	2,384	278	2,299	
	Total of Patna Division.	9,427	1,710	5,754	
Saran	Chapra	1,199	188	1,070	1st April 1887.
	Revelganj	390	76	296	12th December 1890.
	Siwan	703	101	312	1st April 1887.
	Total	2,292	365	1,678	
Champaran	Motihari	372	45	207	1st April 1887.
	Bettiah	456	30	184	Ditto.
	Total	828	75	391	

STATEMENT NO. VI.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1931-32—contd.

District.	Towns.	Number of births during the year ending 31st March 1932.	Number of deaths amongst infants under one year during the year ending 31st March 1932.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1932.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Muzaffarpur	Muzaffarpur	1,181	194	223	1st January 1886.
	Sitamarhi	232	38	91	1st April 1887.
	Hajipur	639	127	53	1st May 1890.
	Lalganj	302	61	24	1st April 1887.
	Total	2,404	420	391	
Darbhanga	Darbhangā	1,970	213	464	24th May 1884.
	Roserah	207	39	98	3rd January 1891.
	Samastipur	193	23	27	25th July 1910.
	Madhubani	419	45	209	1st April 1887.
	Total	2,789	320	798	
	Total of Tirhut Division.	8,313	1,180	3,258	
Monghyr	Monghyr	1,372	241	536	15th November 1882.
	Jamalpur	1,012	175	236	Ditto.
	Total	2,384	416	772	
Bhagalpur	Bhagalpur	1,250	152	583	15th February 1884, withdrawn on 16th October 1895 ; re-extended on 18th August 1898.
	Colgong	152	27	62	Ditto, re-extended on 19th December 1901.
	Total	1,402	179	645	
Purnea	Purnea	192	37	94	1st July 1887.
	Kishanganj	148	16	60	12th November 1892.
	Katihar	169	13	49	8th August 1910.
	Forbesganj	180	15	21	9th August 1912.
	Total	689	81	224	

STATEMENT NO. VI.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1931-32—contd.

District.	Towns.	Number of births during the year ending 31st March 1932.	Number of deaths amongst infants under one year during the year ending 31st March 1932.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1932.	Date of extension of Vaccination Act to town.
1	2	3	4	5	6
Santal Parganas ...	Sahibganj ...	116	17	166	1st May 1884.
	Deoghar ...	9	...	63	Ditto.
	Madhupur ...	47	5	98	22nd August 1910.
	Dumka ...	82	10	52	Notifications, dated the 9th April 1884, and 23rd August 1910.
	Total ...	254	32	379	
	Total of Bhagalpur Division.	4,729	708	2,020	
Cuttack ...	Cuttack ...	939	144	274	1st September 1884.
	Kendrapara ...	301	108	237	7th February 1888.
	Jajpur ...	146	31	36	Ditto.
	Total ...	1,386	283	547	
Balasore ...	Balasore ...	245	58	227	7th February 1888.
Puri ...	Puri ...	486	227	130	Ditto.
Sambalpur ...	Sambalpur ...	289	77	125	7th March 1895.
	Total of Division. Orissa	2,406	645	1,029	
Hazaribagh ...	Hazaribagh ...	386	37	247	1st January 1885.
	Chatra ...	287	20	177	1st August 1885.
	Giridih ...	288	18	235	8th September 1910.
	Total ...	961	75	659	
Ranchi ...	Ranchi ...	566	22	934	1st April 1887.
	Lohardaga ...	226	34	207	25th June 1882.
	Total ...	792	56	1,141	

STATEMENT NO. VI.—Showing the protection afforded to infants in each town in the Province of Bihar and Orissa during the year 1931-32—concl'd.

District.		Towns.	Number of births during the year ending 31st March 1932.	Number of deaths amongst infants under one year during the year ending 31st March 1932.	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1932.	Date of extension of Vaccination Act to town.
1		2	3	4	5	6
Palamau	...	Daltonganj ...	162	17	64	9th October 1890.
Manbhum	...	Purulia ...	480	37	289	1st January 1887.
		Raghunathpur ...	204	24	49	9th February 1894.
		Jhalda ...	179	26	117	9th July 1892.
		Dhanbad ...	297	34	20	5th December 1918.
		Total ...	1,160	121	475	
Singhbhum	...	Chaibassa ...	326	36	273	20th June 1892.
		Chakradharpur ...	109	7	108	13th January 1919.
		Jugsalai ...	188	4	145	1st April 1924.
		Total ...	623	47	526	
		Total of Chota Nagpur Division.	3,698	316	2,865	
		Total for the Province	28,573	4,559	14,926	

Provincial Statement showing the different kinds of lymph

Primary vaccination												
District.	Direct from the calf.					With lanoline or glycerine lymph.					Arm-to-arm	
	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.
	2	3	4	5	6	7	8	9	10	11	12	13
Patna	45,076	44,596	327	153	98·93	...	...
Gaya	60,196	60,044	97	55	99·74	...	...
Shahabad	48,386	48,335	34	17	99·89	...	...
Saran	77,514	76,846	525	143	99·13	...	...
Champanan	40,123	39,963	55	105	99·60	...	...
Muzaffarpur	89,819	89,527	246	46	99·67	...	...
Darbhanga	100,456	1,00,385	62	9	99·92	...	...
Monghyr	65,361	65,310	42	9	99·93	...	...
Bhagalpur	68,906	68,884	20	2	99·96	...	...
Purnea	39,866	39,527	180	159	99·15	...	...
Santal Parganas	57,718	57,425	91	202	99·49	...	...
Cuttack	58,503	58,264	94	145	99·59	...	...
Balasore	33,505	33,388	35	82	99·65	...	...
Angul	7,980	7,908	61	11	99·09	...	...
Puri	44,620	43,998	87	535	98·60	...	...
Sambalpur	22,228	22,165	11	52	99·72	...	...
Hazaribagh	49,614	49,342	190	82	99·45	...	...
Banohi	50,028	50,028	...	...	100·00	...	...
Palamanu	25,052	24,572	209	271	98·08	...	...
Manbhum	51,831	50,445	913	473	97·33	...	...
Singhbhum	22,758	22,663	65	30	99·58	...	...
TOTAL	1,059,540	1,053,615	3,344	2,581	99·44	...	...

II.

used and their rates of success during the year 1931-32.

			Re-vaccination.														
vaccination.			Direct from the calf.					With lanoline or glycerine lymph.					Arm-to-arm vaccination.				
Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
...	8,179	3,762	3,427	990	45.99	...	...	...	...	...
...	2,824	1,978	590	256	70.04	...	...	...	...	...
...	4,071	2,132	1,798	141	52.37	...	...	...	...	...
...	6,105	3,789	1,765	551	62.06	...	...	...	...	...
...	8,538	3,896	2,298	2,344	45.63	...	...	...	...	...
...	10,259	2,752	3,664	3,843	26.82	...	...	...	...	...
...	5,152	2,434	2,191	527	47.24	...	...	...	...	...
...	3,993	690	1,593	1,710	30.22	...	...	...	...	...
...	13,913	7,431	4,953	1,529	53.41	...	...	...	...	...
...	9,287	3,489	3,249	2,549	37.56	...	...	...	...	...
...	10,739	4,237	3,353	3,149	39.45	...	...	...	...	...
...	5,817	1,894	1,812	2,111	32.85	...	...	...	...	...
...	10,427	6,260	2,813	1,354	60.03	...	...	...	...	...
...	2,157	946	260	951	43.86	...	...	...	...	...
...	4,088	1,972	943	1,173	48.24	...	...	...	...	...
...	7,279	4,507	974	1,798	61.92	...	...	...	...	...
...	4,123	2,191	1,236	696	53.14	...	...	...	...	...
...	9,114	4,878	2,355	1,881	67.44	...	...	...	...	...
...	5,961	1,095	282	4,584	18.37	...	...	...	...	...
...	13,270	4,842	6,110	2,318	36.49	...	...	...	...	...
...	1,792	844	770	178	47.09	...	...	...	...	...
...	147,088	66,019	46,436	34,633	44.88	...	...	...	...	...

No. 8015-L.S.-G.

GOVERNMENT OF BIHAR AND ORISSA.

(MINISTRY OF LOCAL SELF-GOVERNMENT.)

R E S O L U T I O N .

The 3rd October 1932.

READ—

The Public Health Report for the year 1931 and the Vaccination Report for the year 1931-32.

Vital Statistics.—There was an increase of about 45,000 in the number of births and a decrease of about 4,600 in the number of deaths, and the excess of the birth over the death rate was 7·3 as compared with 6·6 per cent in the previous year. The Director of Public Health has explained that the apparent fall in the birth rate from 36·2 to 33·9 is not a real one but is due to the adoption of the 1931 in place of the 1921 census figures for the first time in this report. In the same way the decrease in the death rate from 29·6 to 26·6 is apparent rather than real. Government agree with the Director that the question deserves examination whether some way should not be found to remove this anomaly. Though they agree with the Director that the methods at present employed for the collection of vital statistics are most inadequate they doubt whether it is practicable to effect any great improvement upon them; but they are watching with interest the experiment of transferring this duty from the police to the municipal commissioners in certain municipalities, and if it proves a success they will certainly extend it.

2. *Infant mortality.*—There was an increase of the total infant mortality from 137·8 per thousand to 143·6 on the basis of actual births recorded. Government commented last year on the gradual increase in this rate during the last five years, and they have to record with regret that their appeal to municipalities to make a beginning in *maternity* work by appointing at least one *midwife* in each town has met with no response from the majority of municipalities; but in some of the larger towns a beginning has been made and in the Jharia coalfields, as mentioned in Government's resolution on the Jharia Mines Board of Health, the appointment of a Health Visitor with trained midwives under her has proved a great success.

3. *Cholera.*—Deaths fell (in thousands) from 1,55 to 40 and this decrease was the principal factor in the lowering of the death rate. The Director has illustrated by statistics that while in almost all districts there was a marked reduction in the deaths from cholera this reduction was most striking in those districts which were most heavily affected in the previous year. The popularity of inoculation is now firmly established in this province both in rural and urban areas. This is illustrated by the fact that in a year when cholera was comparatively scarce as many as 666,000 doses of vaccine were issued as compared with 731,000 in the previous year when epidemics were severe. In Puri alone 34,226 pilgrims were inoculated.

4. *Bacteriophage.*—Government have read with particular interest the Director's account of the successful results of the employment under the direction of Dr. I. N. Asheshov, the Government of India research worker, of his bacteriophage both in Puri at the *Rat̐ Jatra mela* and in two of the worst cholera districts in the province. As the Director has pointed out, the

duration of the epidemics in these two districts where patients, contacts and water-supplies were treated with bacteriophage was diminished to a remarkable extent. Bacteriophage was also successfully used for the treatment of patients suffering from cholera, and further experiments conducted subsequent to the year under report have confirmed its curative as well as its preventive value. The district boards and their executives are to be congratulated on their keen co-operation with Dr. Asheshov and the Director in this campaign.

5. *Small-pox*.—It is a matter for satisfaction that there was no increase in the death rate from small-pox and that the number of vaccinations increased by 35,476. The Director has commented on one unsatisfactory feature of the vaccination statistics, namely, that more than half of the total number of operations are performed on children over one year of age and on the reason for it, namely, the reluctance of parents to allow infants to be vaccinated. Considerable progress has however been made during the close of the year under report and subsequently in paving the way for the introduction of compulsory vaccination in rural areas. A number of district boards have now agreed to introduce compulsory vaccination. Government are glad to acknowledge their debt to the chairmen of the Patna and Muzaffarpur district boards for demonstrating that a board can enforce compulsory vaccination without increasing the administrative cost. This question of cost had for years proved a stumbling block. It is due to the initiative of the chairman of the Patna district board that this has now been removed. His scheme was followed with certain interesting modifications by the chairman of the Muzaffarpur board, and other boards in the province are now gradually following their lead.

6. *School medical inspection*.—As Government are now being compelled to consider as a retrenchment measure the possibility of reducing, if not totally abolishing, the system of school medical inspection by a staff of Government officers the Director's paragraph on this subject is of particular interest. A total of 13,869 school children were examined by the staff, which consists of an officer of the assistant surgeon and one of the sub-assistant surgeon class in each of the five divisions. Of these children more than half (7,388) were labelled as defectives. Though the Director makes clear that the bulk of these defects are minor ones the duty of parents to ensure their removal by prompt medical treatment requires no comment. One of the defects of the present system is the difficulty which has been experienced in ensuring that this is done. The possibility of ensuring that periodical clinics are held in conjunction with the medical inspections either by Government medical officers or by private practitioners is now being examined. There is at present only one lady school medical officer. Her examination of 1,359 girls revealed a similar percentage of defectives to the examination of boys.

7. Government desire to thank Lieut.-Col. J. A. S. Phillips and his staff for another year of unobtrusive but successful labour. The relations between this department and local bodies continued to be marked by cordial co-operation on both sides. Government have noted the names of the subordinate officers commended in the Director's report.

By order of the Government of Bihar and Orissa
(Ministry of Local Self-Government),

G. E. OWEN,
Secretary to Government.

